SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 1 WASHINGTON, D. C., DECEMBER 12, 1928 WINTER 1928-29

REVIEW OF THE SNOWFALL CONDITIONS FOR THE SEASON TO DATE

September had trifling amounts of snowfall in some western mountain districts, as may usually be expected in that month, but over several eastern sections snow was observed at unusually early dates, notably in Michigan about the 23d to 25th, and at points in the mountains of western Maryland on the 25th where the occurrences at a number of points were the earliest of record.

In October snowfall was mainly less than normal, particularly from the Plains States eastward. About the 10th to 13th considerable snow occurred in the northern mountain districts, the fall being particularly heavy in portions of Wyoming and near-by areas; that at Lander amounting to 22 inches, the ground remaining covered locally for more than 10 days. At the very end of the month some noteworthy snows occurred in parts of the Rocky Mountain areas, particularly in Wyoming and Colorado, and extending into the western parts of Kansas, Nebraska, and South Dakota.

In November snowfall was again heavy in portions of the central Mountain States and to the eastward as far as the Missouri Valley and southward as far as the Texas Panhandle. The falls were particularly heavy in portions of the lower Missouri Valley where near the end of the month some unusually heavy falls for so early in the season were reported. Over the more eastern parts there was considerable snow from the upper Mississippi Valley eastward over Michigan and near the lower Lakes and over northern New York and near-by parts of New England.

In the far West the snowfall during November was apparently light and no important falls occurred at the lower elevations.

From December 1 to date snowfall has been light over most districts, save that on the 8th and 9th some heavy snow for the location and period of the year occurred to the eastward of Chesapeake Bay region where amounts in excess of 6 inches occurred locally near the coast, the major portion of which still remained on the ground at the close of the week.

DEPTH OF SNOW ON GROUND

As indicated on the chart, no important snow depth had accumulated at the close of the present week over large areas, and, even in the middle Rocky Mountain regions where the snowfall had been unusually heavy during the early part of the season, much of the cover had disappeared. In other parts of the mountain districts of the West no large amounts had yet accumulated in the high elevations.

ICE IN RIVERS AND HARBORS

No important amounts of ice have yet formed on the rivers or the harbors of the Great Lakes save in extreme northern localities. Bismarck, N. Dak., reports 7 inches of ice on the Missouri River at that point, and at La Crosse, Wis., there are 3 inches on the Mississippi. About 4 inches of ice is reported on the south shore of Lake Superior and 8 inches appears on Moosehead Lake, Me.

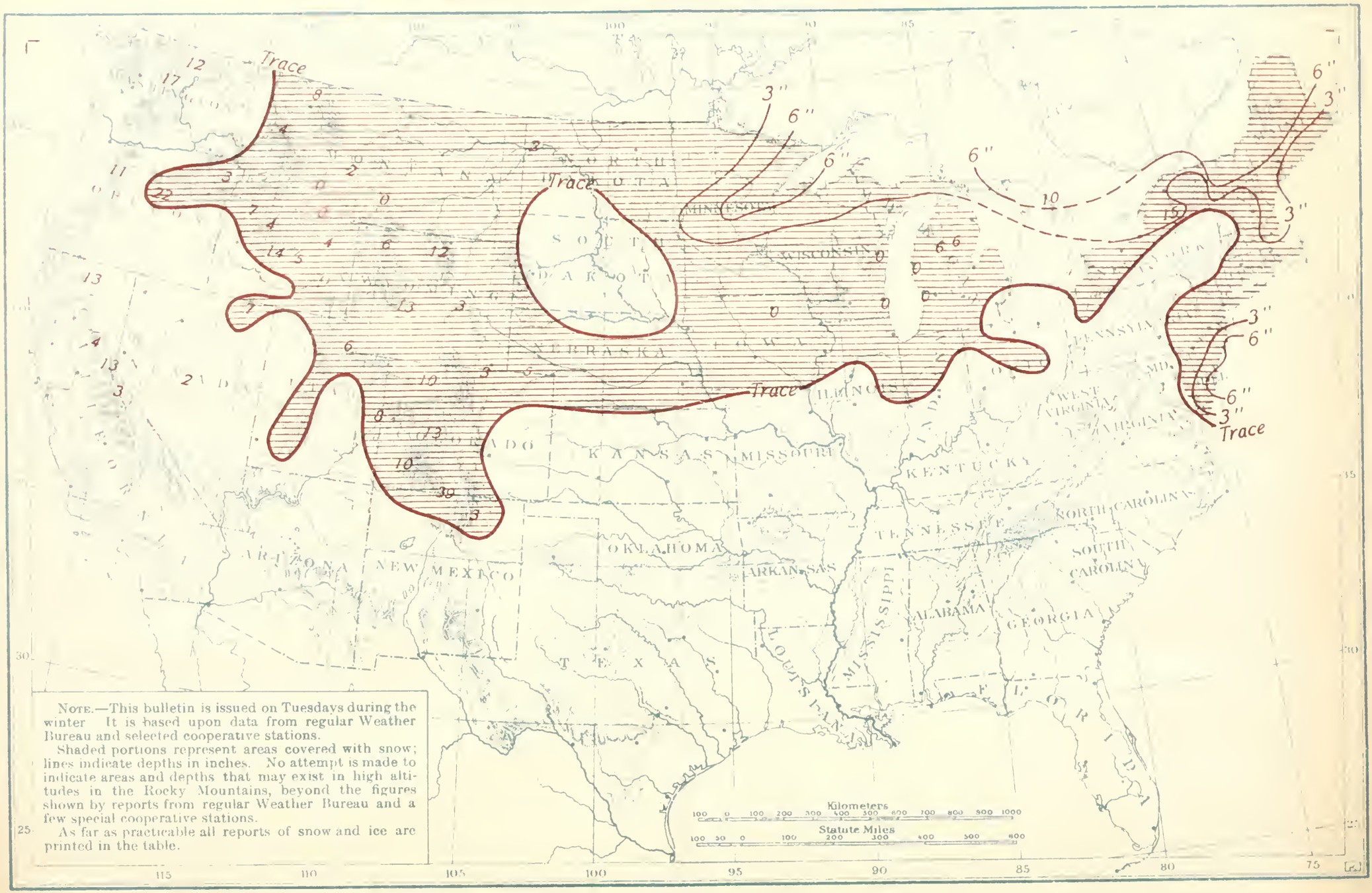
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., DECEMBER 10, 1928

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*Nevada*	*Inches*	*Inches*
Eagle	7	.....	Austin	2	.....
Fort Yukon	19	.....	Gold Creek	7	.....
California			North Fork	3	.....
Inskip	4	.....	*New Hampshire*		
McCloud	13	.....	Durham	5	.....
Norden	13	.....	Hanover	2	.....
Colorado			Pittsburg	10	.....
Crested Butte	13	.....	*New Jersey*		
Cumbres	39	.....	Atlantic City	2	.....
Durango	3	.....	Cape May	6	.....
Steamboat Springs	10	.....	Lakewood	6	.....
Delaware			Sandy Hook	1	0.0
Millsboro	6	.....	*New Mexico*		
Wilmington	1	.....	Chama	10	.....
Idaho			Des Moines	3	.....
Idaho City	3	.....	Elizabethtown	3	.....
Ketchum	1	.....	Tres Piedras	1	.....
Montpelier	3	.....	*New York*		
Pierce City	3	.....	Beaver River	15	.....
Spencer	4	.....	Cutchogue	1	.....
Vienna Mine	14	.....	Jamestown	1	.....
Iowa			Malone	1	.....
Des Moines	3	4.0	New York	1	0.0
Dubuque	T.	*†	Oswego	4	0.0
Keokuk	T.	0.5	Saranac Lake	1	.....
Sioux City	T.	*†	Watertown	5	.....
Maine			*North Dakota*		
Eastport	1	0.0	Bismarck	T.	7.0
Farmington	14	.....	Williston	2	5.0
Greenville	11	8.0	*Oregon*		
Houlton	9	.....	Harrison Mine	11	.....
Portland	3	0.0	Imperial Mine	22	.....
Maryland			Meacham	2	.....
Princess Anne	5	.....	Wallowa	3	.....
Massachusetts			*Pennsylvania*		
Boston	3	0.0	Freeland	1	.....
Holyoke	0	†	Warren	1	.....
Otis	2	.....	West Chester	2	.....
Michigan			*Rhode Island*		
Benzonia	3	.....	Kingston	1	.....
Cadillac	6	.....	*Utah*		
Houghton	2	4.0	Cedar City	2	.....
Humboldt	2	.....	Logan	2	.....
Ironwood	5	.....	Silver Lake	27	.....
Mackinaw	1	.....	Watson	8	.....
Marquette	3	0.0	*Vermont*		
Newberry	4	.....	Brattleboro	0	2.0
Port Huron	T.	2.0	Northfield	6	.....
Minnesota			White River Junction	2	.....
Campbell	4	.....	*Washington*		
Collegeville	5	.....	Berne	17	.....
Duluth	7	4.5	Twisp	12	.....
Fort Ripley	11	.....	*Wisconsin*		
Montevideo	2	.....	Fond du Lac	2	.....
Moorhead	T.	2.0	Green Bay	0	3.0
Mora	4	.....	La Crosse	T.	3.0
Virginia	4	.....	Madison	1	.....
Worthington	6	.....	Wausau	0	3.0
Montana			*Wyoming*		
Belton	8	.....	Alta	1	.....
Bozeman	2	.....	Casper	3	.....
Haugan	4	.....	Cheyenne	3	.....
Helena	2	.....	Cody	6	.....
Miles City	1	.....	Dixon	3	.....
Nebraska			Dome Lake	12	.....
Broken Bow	4	.....	Evanston	6	.....
Guide Rock	5	.....	Lander	13	.....
Lodgepole	5	.....	Sheridan	4	.....
North Platte	1	.....	Wheatland	4	.....
Omaha	3	*	Yellowstone Park	1	.....

*Shore ice. †Floating ice. ‡Ice gorged. § Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., December 10, 1928



NOTE.—This bulletin is issued on Tuesdays during the winter It is based upon data from regular Weather Bureau and selected cooperative stations.

Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist in high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 2 WASHINGTON, D. C., DECEMBER 19, 1928 WINTER 1928–29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

The week opened with generally fair weather over the greater part of the country, though some rain was falling in the west Gulf States and snow or rain had occurred during the past 24 hours in the far West, and snow was still falling at points in the Rocky Mountain regions. The snow from this storm was generally heavy in the high mountains of the far West, some 30 inches or more being reported from central California. The rain over the west Gulf area dissipated during the following day, but it was soon followed by another area of low pressure, which, by Thursday morning, had reached the lower Mississippi Valley, attended by local heavy rain in portions of the area.

By Friday morning the storm area in the Mississippi Valley had moved to the Ohio Valley and lower Lake region and precipitation had extended eastward to the middle Atlantic coast. At the same time the western precipitation area had extended to the middle and southern Rocky Mountains. By Saturday the rains in the East had ceased, but local snows continued in the Rocky Mountains.

At the morning observation of Sunday the low-pressure area that had prevailed to some extent in the middle Plateau and Rocky Mountain region had advanced to northern Texas and local rain or snow had set in over a considerable area from Texas northeastward to near the Lake region, and by Monday morning a well-developed storm was central over Indiana and rain or snow was falling over an extensive area from the southern Plains northeastward to the St. Lawrence Valley. The snow was comparatively light, but occurred over a wide area from the Dakotas eastward and southeastward to the lower Missouri and Mississippi Valleys and Lake region. This storm moved rapidly northeastward and by Thursday morning it was central near the Gulf of St. Lawrence and precipitation had occurred over all eastern districts, though both rain and snow were mostly light.

No important cold weather occurred during the week, except at the close when there were sharp falls in the temperatures of 20° or more over southern districts from Texas eastward to the middle Gulf States and portions of the Ohio Valley.

The week, as a whole, was warmer than normal over the entire eastern two-thirds of the country and decidedly so from the Dakotas eastward. It was moderately cooler than normal in the middle and southern districts of the far West.

Precipitation ranged from 2 to 4 inches over the lower Mississippi Valley and from 1 to 2 inches over other considerable areas from the Southern Plains eastward and northeastward to the coast, except over the South Atlantic and east Gulf States where, in some sections, not more than traces occurred. There were amounts up to 1 inch along the coast of California and heavy falls of snow occurred in the mountains of that and other nearby mountain sections.

DEPTH OF SNOW ON GROUND

East of the Rocky Mountains no important snow depths have yet accumulated save locally in northern portions of New York and New England. In the mountain districts of the West considerable snow occurred during the week, particularly in the mountains of California and States adjoining to the eastward, but some loss in depth as compared with the previous week occurred in Colorado, Wyoming, and the higher elevations of the Cascades.

ICE IN RIVERS AND HARBORS

Small increases in ice thickness occurred in the upper reaches of the Missouri River, but elsewhere there is now less ice than reported a week ago.

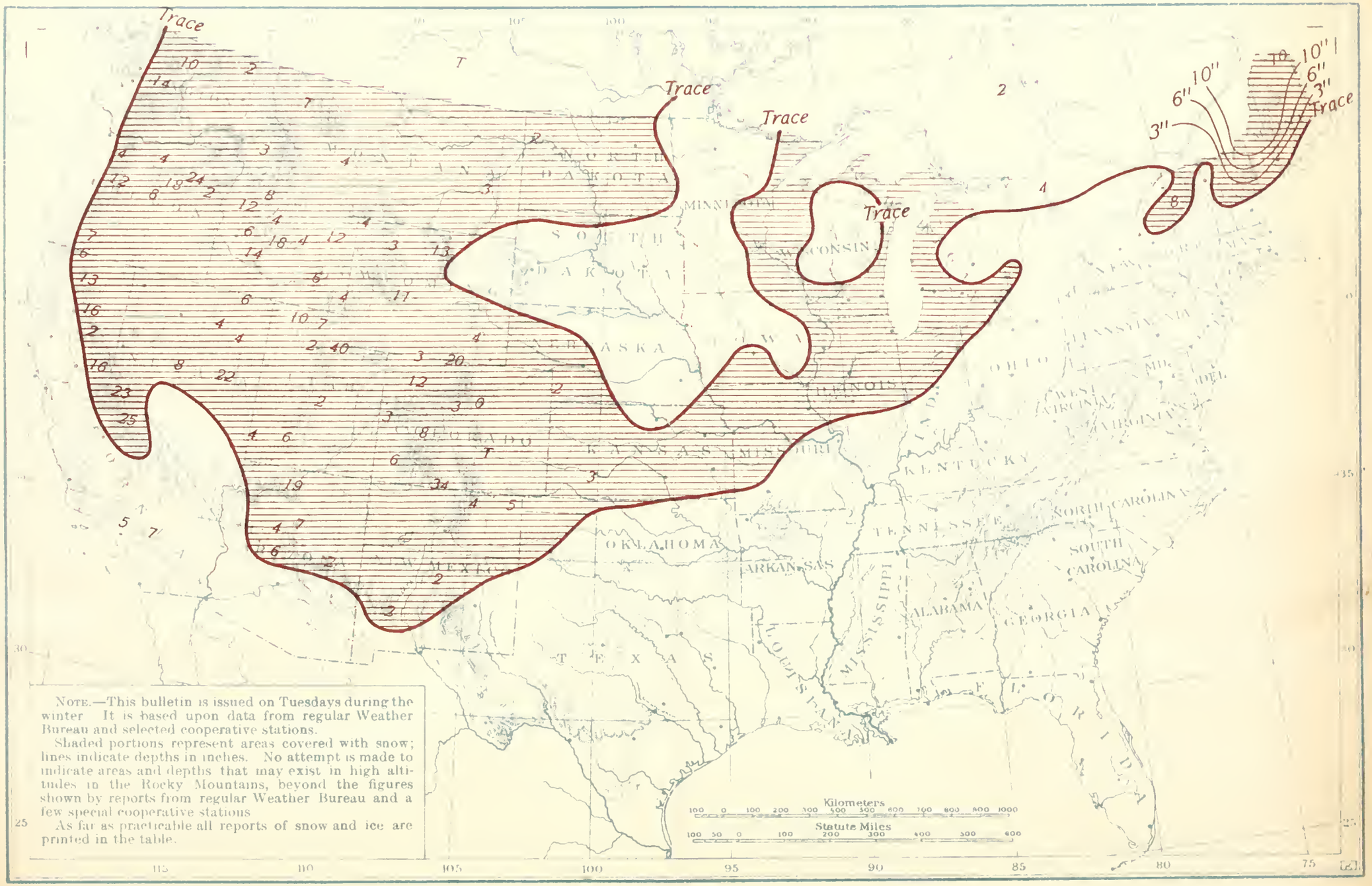
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., DECEMBER 17, 1928

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*Missouri*	*Inches*	*Inches*
Barrow	2	.....	Brunswick	3	.....
Eagle	12	.....	Hannibal	1	0.0
Nome	8	.....	Kansas City	1	0.0
Tanana	8	.....	*Montana*		
Arizona			Helena	4	.....
Bright Angel	19	.....	Miles City	3	.....
Flagstaff	7	.....	*Nevada*		
Grand Canyon	4	.....	Arthur	4	.....
Pinedale	2	.....	Austin	8	.....
Prescott	6	.....	Elko	4	.....
Williams	4	.....	Gold Creek	6	.....
California			Kimberly	22	.....
Big Creek	10	.....	North Fork	4	.....
Blue Canyon	16	.....	Reno	T.	.....
Hat Creek	3	.....	Winnemucca	T.	.....
Huntington Lake	25	.....	*New Hampshire*		
Mount Wilson	5	.....	Lancaster	3	.....
Norden	30	.....	Pittsburg	10	.....
Relief	23	.....	*New Mexico*		.....
Sierraville	4	.....	Chama	10	.....
Squirrel Inn	7	.....	Des Moines	5	.....
Colorado			Elizabethtown	4	.....
Crested Butte	8	.....	Fort Bayard	2	.....
Cumbres	34	.....	Mountainair	2	.....
Dillon	3	.....	Taos	1	.....
Grand Junction	3	.....	*New York*		
Pueblo	T.	0.0	Beaver River	8	.....
Rico	6	.....	Schroon Lake	2	.....
Steamboat Springs	12	.....	*North Dakota*		
Idaho			Bismarck	T.	10.0
Big Creek	8	.....	Williston	2	8.5
Boise	1	.....	*Oregon*		
Hailey	7	.....	Baker	2	.....
Idaho City	6	.....	Detroit	12	.....
Ketchum	8	.....	Fish Lake	7	.....
Kirkham	4	.....	Imperial Mine	24	.....
McCall	12	.....	Meacham	4	.....
Mackay	4	.....	Siskiyou	6	.....
Montpelier	4	.....	*South Dakota*		
Pierce City	3	.....	Huron	0	4.5
Pocatello	6	.....	Yankton	0	*†
Shake Creek	14	.....	*Utah*		
Spencer	12	.....	Cedar City	6	.....
Vienna Mine	18	.....	Deseret	2	.....
Illinois			Kelton	10	.....
Chicago	1	.....	Logan	7	.....
Griggsville	2	.....	Modena	4	.....
Pontiac	1	.....	Ogden	2	.....
Kansas			Provo	1	.....
Dodge City	3	.....	Salt Lake City	2	.....
Iola	T.	0.0	Silver Lake	40	.....
Topeka	1	.....	*Washington*		
Wichita	1	.....	Berne	14	.....
Maine			Spokane	T.	.....
Greenville	8	8.0	Sullivan Lake	2	.....
Houlton	9	.....	Twisp	10	.....
Millinocket	10	.....	*Wisconsin*		
Van Buren	10	.....	Green Bay	0	*
Michigan			Milwaukee	1	.....
Cassopolis	T.	.....	Park Falls	T.	.....
Grand Rapids	1	.....	Wausau	0	2.5
Houghton	1	†	*Wyoming*		
Lansing	2	.....	Cody	3	.....
Port Huron	1	0.0	Dixon	3	.....
Sault Ste. Marie	1	0.0	Dome Lake	13	.....
Minnesota			Foxpark	20	.....
Duluth	T.	†	Lander	11	.....
Ely	1	.....	South Pass City	6	.....
Fort Ripley	1	.....	Wheatland	4	.....
Moorhead	T.	*	Yellowstone Park	4	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., December 17, 1928



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SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 3 WASHINGTON, D. C., DECEMBER 27, 1928 WINTER 1928-29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

The storm prevailing over the eastern portion of the country at the close of the preceding week had generally dissipated by Tuesday morning and fair weather existed at that time over nearly all districts, except that light snow was falling locally from the Great Lakes westward to North Dakota. By Wednesday low barometric pressure moved southeastward from Canada into the upper Lake region, but only light precipitation, mostly snow, resulted.

At the morning observation of Thursday low pressure appeared over the Florida Peninsula and local heavy rains were falling near the Gulf coast. These mostly ceased by the following morning, although the rain area extended to near the middle Atlantic coast, and light snows occurred from the Great Lakes eastward. By Saturday the weather had cleared in practically all districts, and the anticyclone that had persisted for a considerable period in the middle Plateau became more pronounced and, with a similar high pressure area dominating the middle Atlantic coast region, conditions favored clear and moderate weather over nearly all districts, and similar conditions existed during the remainder of the week save for local precipitation in some Atlantic coast districts and in the Middle and North Pacific Coast States.

The week, as a whole, was distinctly cold in the Plateau region under the influence of almost continuous anticyclonic conditions, and it was cooler also over most other areas to westward of the Rocky Mountains and generally in the Gulf States, Ohio Valley, and Great Lakes region. The week was decidedly warm in the northern Great Plains and moderately warm to the southward as far as Kansas and Oklahoma and in the Northeastern States. No unusual cold occurred, however, and there was little precipitation save along the Gulf, South Atlantic, and Pacific coasts.

Light snows fell locally in the Lake region and there were doubtless light falls in some western mountains, but snowfall was remarkably light in practically all districts.

DEPTH OF SNOW ON GROUND

At the close of the week the accumulated depth of snow on the ground was generally far less than normal in the Great Lakes region and New England, and little or none has accumulated in other areas east of the Rocky Mountains. In the western mountains there are fairly good depths in most districts, particularly in the higher elevations of the Plateau region, but no large amounts appear in the main chain of the Rocky Mountains or in the mountains of California.

Compared with the preceding week, there are slight increases over northern districts in the Great Lakes region and near-by areas, but otherwise the depth of the snow cover is less than a week ago, particularly in the far West where depths up to 12 inches disappeared.

ICE IN RIVERS AND HARBORS

There has been a small, but rather uniform, increase in the amount of ice in the rivers and lakes of the more northern districts over the amounts reported a week ago, but they still continue materially less than normal.

In the Missouri shore ice is reported as far as Kansas City, Mo., while in the Mississippi shore and floating ice is reported nearly to St. Louis. In the Lake region ice is reported from nearly all the lakes, and some ice has formed on the rivers of the Atlantic coast as far south as Harrisburg on the Susquehanna and Albany on the Hudson, with a maximum depth of 18 inches on Moosehead Lake in central Maine.

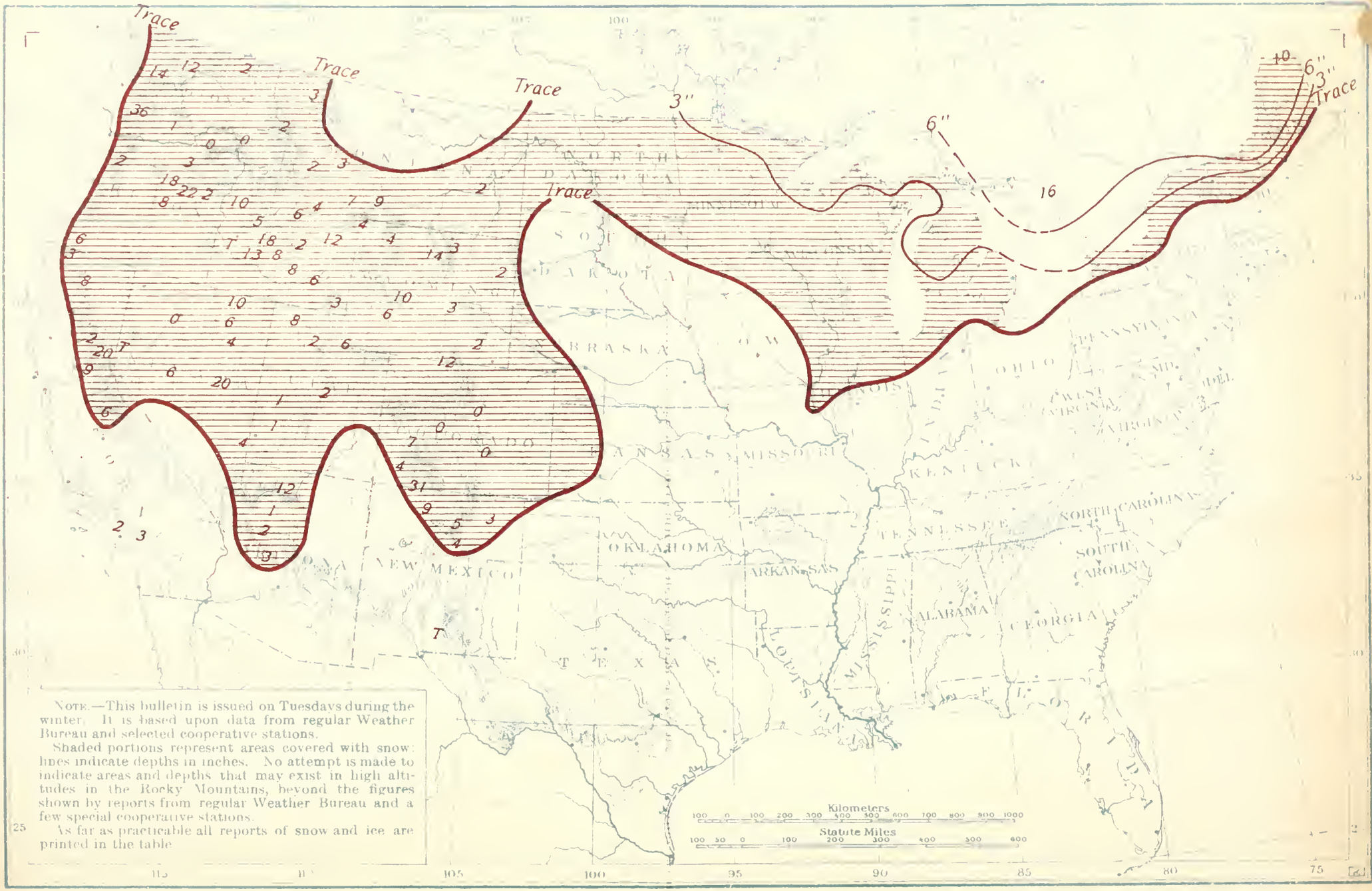
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., DECEMBER 24, 1928

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*Nevada*	*Inches*	*Inches*
Bethel	14	.....	Austin	6	.....
Eagle	12	.....	Gold Creek	10	.....
Fort Yukon	21	.....	Kimberly	20	.....
Arizona			McGill	3	.....
Bright Angel	12	.....	*New Hampshire*		
Flagstaff	1	.....	Berlin	1	.....
Grand Canyon	1	.....	Pittsburg	9	.....
Prescott	3	.....	*New Mexico*		.....
California			Chacon	5	.....
Blue Canyon	9	.....	Gascon	4	.....
McCloud	8	.....	Tres Piedras	1	.....
Norden	20	.....	Truchas	2	.....
Yosemite	6	.....	*New York*		
Colorado			Alfred	2	.....
Crested Butte	7	.....	Buffalo	3	*
Cumbres	31	.....	Canton	2	.....
Idaho			Jamestown	3	.....
Hailey	6	.....	Lowville	4	.....
McCall	10	.....	Malone	2	.....
Mascot Mine	8	.....	Ogdensburg	3	.....
Pocatello	6	.....	Oswego	2	1.0
Soldier Creek	7	.....	Rome	1	.....
Spencer	12	.....	Watertown	3	.....
Vienna Mine	18	.....	*North Dakota*		
Indiana			Bismarck	T.	13.5
Notre Dame	1	.....	Williston	T.	9.0
Iowa			*Ohio*		
Dubuque	T.	*†	Cleveland	T.	0.0
Keokuk	0	1.0	Sandusky	0	1.5
Sioux City	0	3.0	Toledo	0	2.5
Maine			*Oregon*		
Farmington	8	.....	Baker	2	.....
Gardiner	T.	2.0	Fish Lake	6	.....
Greenville	5	18.0	Government Camp	2	.....
Millinocket	8	.....	Harrison Mine	18	.....
Van Buren	10	.....	Imperial Mine	22	.....
Michigan			Meacham	3	.....
Alpena	1	3.0	Olive Lake	8	.....
Battle Creek	2	.....	Siskiyou	2	.....
Benzonia	5	.....	*Utah*		
Cadillac	8	.....	Kelton	8	.....
East Tawas	3	.....	Modena	4	.....
Grand Rapids	2	.....	Ogden	2	.....
Houghton	4	2.5	Price	2	.....
Humboldt	1	.....	Provo	1	.....
Iron River	1	.....	*Vermont*		
Ironwood	8	.....	Brattleboro	0	3.0
Lansing	2	.....	Burlington	T.	0.0
Mackinaw	2	.....	St. Johnsbury	1	.....
Mount Pleasant	4	.....	*Washington*		
Munising	4	.....	Berne	14	.....
Newberry	2	.....	Paradise Inn	36	.....
Port Huron	T.	3.0	Sullivan Lake	2	.....
Sault Ste. Marie	4	*	Twisp	12	.....
Minnesota			Yakima	1	.....
Duluth	1	4.0	*Wisconsin*		
Ely	4	.....	Green Bay	T.	4.0
Fort Ripley	2	.....	Medford	1	.....
Roseau	3	.....	Park Falls	1	.....
Virginia	2	.....	Wausau	2	7.5
Montana			*Wyoming*		
Belton	9	.....	Casper	3	.....
Big Timber	9	.....	Cheyenne	1	.....
Bozeman	7	.....	Cody	4	.....
Dillon	4	.....	Dome Lake	14	.....
Grant	6	.....	Evanston	6	.....
Haugan	2	.....	Foxpark	12	.....
Loweth	2	.....	Newcastle	2	.....
Miles City	2	.....	Sheridan	3	.....
Philipsburg	2	.....	South Pass City	6	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., December 24, 1928



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SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 4 WASHINGTON, D. C., JANUARY 3, 1929 WINTER 1928–29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

The closing week of 1928 was remarkably free from adverse weather conditions in practically all parts of the country; temperatures were mainly moderate and precipitation was unusually light, as appreciable amounts occurred in only a few localities.

The week opened with anticyclonic conditions dominating the Southern States and fair weather existing generally, save over the Pacific Coast States where cloudiness was general and precipitation had occurred quite widely during the preceding 24 hours.

Mostly fair and moderately warm weather for midwinter prevailed during the following few days, though some precipitation occurred about Thursday in the Ohio Valley and portions of near-by areas, and light snows or rains occurred in the far Northwest, continuing into Friday and Saturday over portions of the latter region, while in the East the precipitation area extended locally into the middle Atlantic and Northeastern States.

Local light precipitation continued over the far Northwest during Sunday, extending on Monday eastward to the upper Lake region, but elsewhere the last few days of the week were mainly without important precipitation of any kind, and temperatures continued moderate, except that decidedly colder weather was advancing from the Canadian Northwest into the upper Mississippi Valley and northern Plains, and snow was falling at the close over portions of the Great Plains and Mississippi Valley.

The week, as a whole, was warmer than normal over all parts of the country save in southern Florida, and it was decidedly so in all northern sections, though at the close temperatures below zero were reported in the Northwest, due to the advancing cold wave.

The weekly precipitation was negligible over most southern districts and only small amounts occurred in most other regions, save along the middle and north Atlantic coasts where the totals ranged up to 1 inch or slightly more, and along the Pacific coast from central California northward where the weekly falls ranged from 2 to 5 inches.

DEPTH OF SNOW ON GROUND

Due to the general absence of appreciable snowfall, the amounts of snow on ground were not greatly different from those reported a week ago, save that some melting reduced the depths in the Great Lakes region, while slight increases are noted in northern New England, and snow during Monday evening gave increased depths in portions of eastern Kansas and near-by areas.

In the northern Rocky Mountains and over the mountains of the far Northwest there was considerable snow during the week and depths on the ground increased materially, particularly in the higher elevations of western Montana, Idaho, Oregon, and Washington.

From California eastward there was little snowfall during the week in the mountains and the accumulated amounts showed general decreases, except in western Colorado where the increases ranged up to 7 inches.

The snow-covered area remains largely as previously reported, though a considerable part of eastern Kansas and some near-by portions of Missouri and Arkansas, bare a week ago, now have a moderate cover.

ICE IN RIVERS AND HARBORS

The ice in the rivers and on the harbors of the Great Lakes remains about as reported a week ago, due to the prevailing warmth of the week, and no ice of sufficient thickness for profitable harvesting has yet formed in the regions where it is usually gathered.

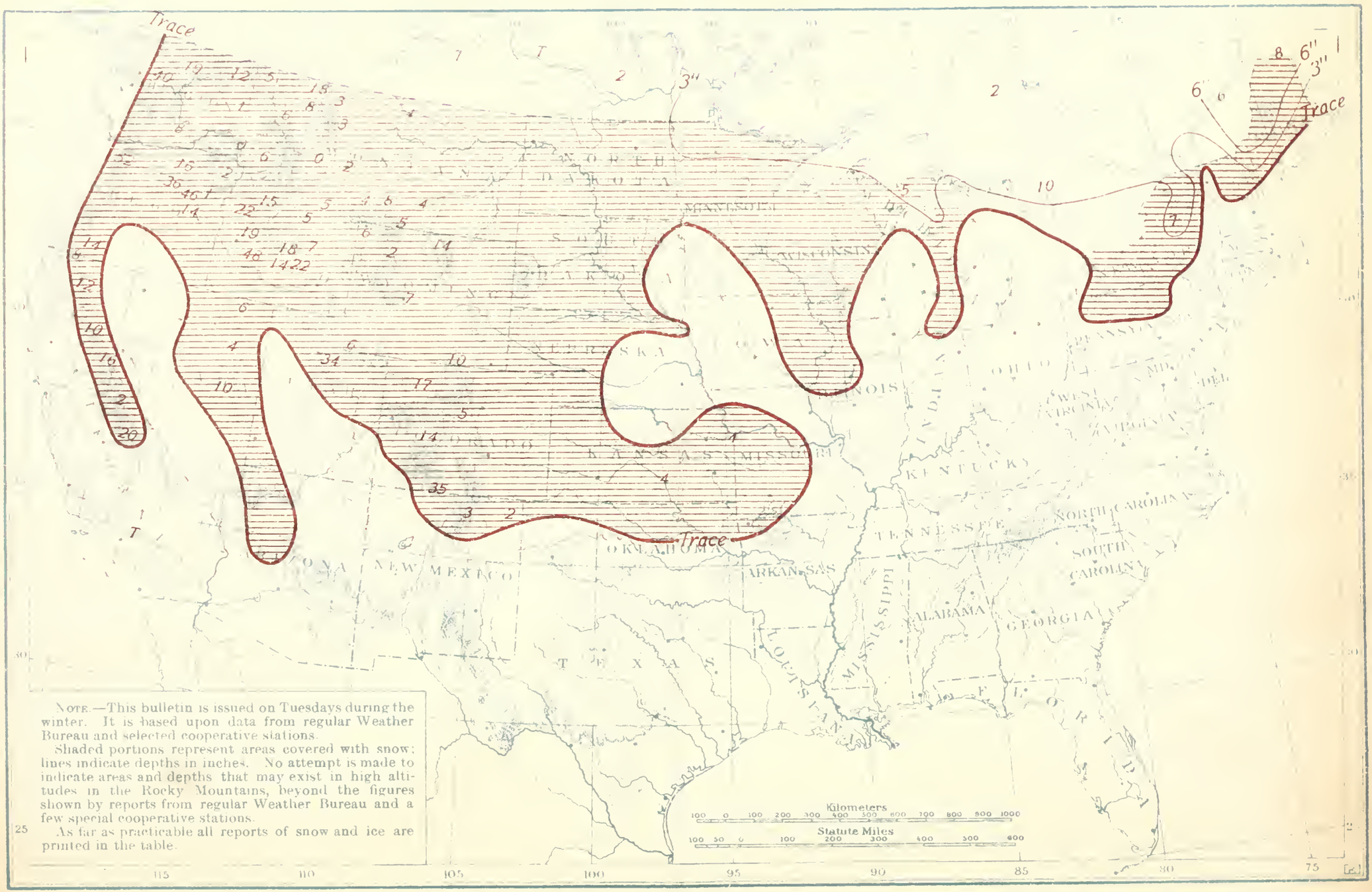
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., DECEMBER 31, 1928

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*Nevada*	*Inches*	*Inches*
Barrow	2	.....	Arthur	4	.....
Bethel	14	.....	Austin	2	.....
Nome	9	.....	Kimberly	10	.....
Arkansas			McGill	4	.....
Bentonville	1	.....	North Fork	5	.....
California			*New Hampshire*		
Blue Canyon	3	.....	Berlin	5	.....
Huntington Lake	20	.....	Concord	0	4.0
Inskip	10	.....	Lancaster	1	.....
McCloud	12	.....	Pittsburg	13	.....
Norden	16	.....	Woodsville	1	.....
Yosemite	2	.....	*New Mexico*		
Colorado			Chama	10	.....
Cumbres	35	.....	Des Moines	2	.....
Dillon	5	.....	Elizabethtown	3	.....
Grand Junction	1	.....	*New York*		
Leadville	3	.....	Beaver River	6	.....
Rico	6	.....	Buffalo	T.	*
Steamboat Springs	17	.....	Old Forge	7	.....
Idaho			Saranac Lake	3	.....
Big Creek	15	.....	Syracuse	1	.....
Idaho City	19	.....	*North Dakota*		
Ketchum	18	.....	Bismarck	T.	14.0
Mascot Mine	22	.....	Devils Lake	1	.....
Montpelier	8	.....	Williston	T.	13.0
Pierce City	6	.....	*Oregon*		
Pocatello	3	.....	Austin	14	.....
Porthill	5	.....	Baker	1	.....
Vienna Mine	48	.....	Detroit	2	.....
Kansas			Fish Lake	14	.....
Iola	1	0.0	Government Camp	52	.....
McPherson	1	.....	Imperial Mine	46	.....
Medicine Lodge	1	.....	Meacham	16	.....
Osage City	1	.....	Olive Lake	18	.....
Topeka	4	.....	Siskiyou	8	.....
Wichita	4	.....	Wallowa	2	.....
Maine			*South Dakota*		
Greenville	4	19.0	Huron	T.	7.5
Houlton	3	.....	Yankton	0	*†
Millinocket	6	.....	*Utah*		
Van Buren	8	.....	Kelton	6	.....
Michigan			Price	1	.....
East Jordan	4	.....	Silver Lake	34	.....
Escanaba	1	*	*Vermont*		
Humboldt	1	.....	Brattleboro	0	6.0
Iron Mountain	1	.....	Northfield	2	.....
Marquette	3	0.5	St. Johnsbury	4	.....
Newberry	2	.....	*Washington*		
Port Huron	0	3.0	Spokane	1	.....
Sault Ste. Marie	3	*	Sullivan Lake	12	.....
Minnesota			Twisp	19	.....
Duluth	2	7.0	Walla Walla	3	.....
Ely	4	.....	Yakima	8	.....
Moorhead	2	3.5	*Wisconsin*		
Mora	1	.....	Ashland	2	.....
St. Paul	2	*	Eau Claire	1	.....
Thief River Falls	4	.....	Green Bay	T.	6.0
Missouri			Park Falls	2	.....
Columbia	1	.....	Spooner	3	.....
Kansas City	4	0.0	Stevens Point	1	.....
Springfield	1	.....	Wausau	2	5.0
Montana			*Wyoming*		
Belton	18	.....	Cody	2	.....
Billings	4	.....	Dixon	4	.....
Choteau	3	.....	Dome Lake	14	.....
Havre	4	.....	Evanston	6	.....
Kalispell	8	.....	Foxpark	10	.....
Miles City	1	.....	Lander	7	.....
Red Lodge	5	.....	Sheridan	3	.....
Thompson Falls	6	.....	Yellowstone Park	6	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., December 31, 1928



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As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 5 WASHINGTON, D. C., JANUARY 9, 1929 WINTER 1928–29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

The favorable weather that prevailed so generally during December, 1928, terminated promptly with the beginning of the new year when a cold wave overspread the central valleys and precipitation became rather general over the districts from the Mississippi Valley eastward, with considerable snow over the Great Plains, the upper Mississippi Valley, and to the eastward.

By Wednesday morning the precipitation area extended to the St. Lawrence Valley, and much colder weather advanced into the Ohio Valley and east Gulf States, the line of freezing extending to the coast districts of Alabama and western Florida.

Fair weather prevailed over most districts from the Rocky Mountains eastward until about Friday morning when a precipitation area that had set in over the more western districts earlier in the week had advanced to the Rocky Mountain and Great Plains area, and by Saturday morning precipitation had overspread nearly the entire area from the Rocky Mountains eastward to the upper Lakes and to the lower portions of the Ohio and Mississippi Valleys. This storm area overspread the entire eastern portions by Sunday morning, and had been attended by heavy rains in portions of the east Gulf and Atlantic Coast States, by rain or snow in the Ohio Valley and Lake region, and by high winds and drifting snow in the upper Mississippi and lower Missouri Valleys.

Following this storm much colder weather overspread the central valleys; freezing temperatures extended to the Gulf coast districts and zero weather extended southward to central Missouri. At the same time much warmer weather had overspread the more eastern districts and a short period of warmth had followed over the western Plains.

By Monday morning the cold wave had extended to the Atlantic coast, and at the same time colder weather had again overspread the Great Plains, and at the close of the week the entire area east of the Rocky Mountains was experiencing the coldest weather of the year so far, though a rapid rise in temperature had set in over the Northwest.

For the week, as a whole, the temperature was below normal over most districts, except the Northeastern States and locally in the far West. Over the Mississippi and Ohio Valleys and Great Lakes the average temperatures were from 8° to 14° below normal, and freezing weather occurred in practically all southern sections, except portions of Florida and extreme southern Texas. Precipitation was fairly well distributed and occurred in generous amounts over most districts from the Great Plains eastward and along the Pacific coast.

DEPTH OF SNOW ON GROUND

Compared with a week ago, the snow-covered area has increased materially over the districts from the Rocky Mountains to the Ohio Valley, but has not materially changed elsewhere.

Heavy falls occurred over a rather narrow area from eastern Kansas northeastward to upper Michigan, attended by much drifting, blocking traffic over many portions of this area.

Some increases were rather general over the western mountain areas, and the accumulated depths are now above normal in portions of Colorado, but mostly below normal in the mountains of the Southwest, including the high elevations of California.

ICE IN RIVERS AND HARBORS

Due to the general cold over the drainage basins of the Missouri and Mississippi Rivers, the ice thickness increased materially where it had already formed to some extent, and the harbors of the Great Lakes are now generally ice-covered. Considerable ice appears to have formed in favorable localities from Pennsylvania northward, with a maximum of 21 inches in central Maine.

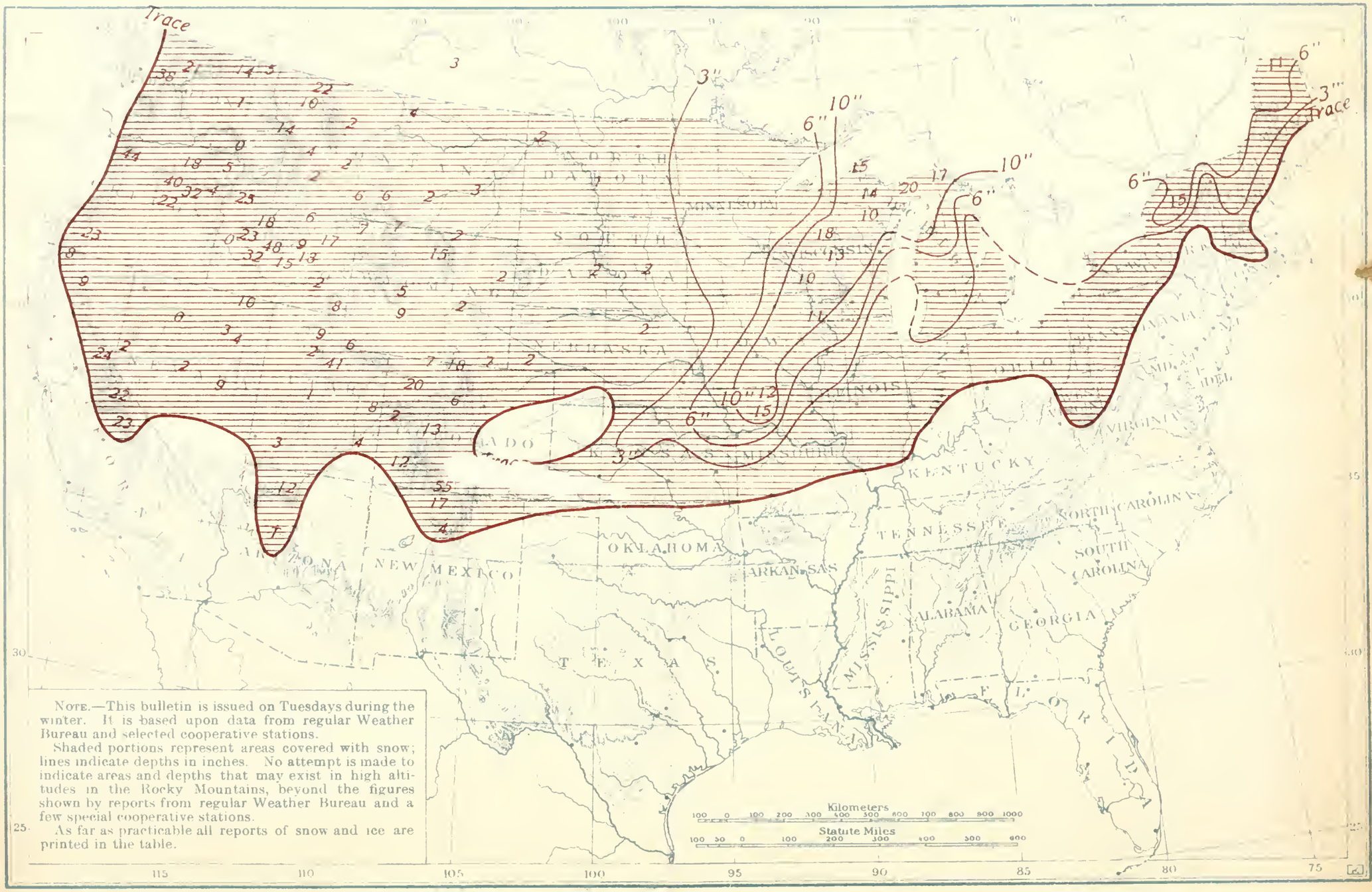
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., JANUARY 7, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Arizona	*Inches*	*Inches*	*Montana*	*Inches*	*Inches*
Bright Angel	12	.....	Bozeman	6	.....
Prescott	T.	.....	Haugan	14	.....
California			Helena	2	.....
McCloud	9	.....	Kalispell	10	.....
Norden	24	.....	Miles City	3	.....
Relief	22	.....	Missoula	4	.....
Sierraville	1	.....	*Nebraska*		
Colorado			Auburn	6	.....
Crested Butte	13	.....	Lodgepole	2	.....
Cumbres	55	.....	Omaha	3	2.0
Durango	4	.....	*Nevada*		
Steamboat Springs	20	.....	Elko	3	.....
Idaho			Gold Creek	10	.....
Hailey	15	.....	Reno	2	.....
Kirkham	18	.....	*New Hampshire*		
McCall	25	.....	Concord	0	4.0
Porthill	5	.....	Hanover	3	.....
Soldier Creek	23	.....	*New Mexico*		
Spencer	17	.....	Chama	17	.....
Illinois			Taos	2	.....
Freeport	8	.....	*New York*		
Griggsville	2	.....	Albany	T.	*
Peoria	3	3.0	Beaver River	15	.....
Pontiac	5	.....	Oswego	3	†
Indiana			Rochester	2	2.0
Angola	3	.....	Rome	2	.....
Collegeville	2	.....	Watertown	5	.....
Notre Dame	5	.....	*North Dakota*		
Terre Haute	T.	1.0	Bismarck	1	18.0
Iowa			Ellendale	1	.....
Albia	7	.....	Williston	2	16.0
Charles City	6	.....	*Oregon*		
Davenport	2	10.0	Baker	4	.....
Des Moines	10	5.0	Harrison Mine	40	.....
Marshalltown	10	.....	Siskiyou	8	.....
Pocahontas	4	.....	*Pennsylvania*		
Kansas		.....	Erie	2	0.5
Concordia	3	.....	Harrisburg	0	4.0
Dodge City	2	.....	*South Dakota*		
Liberal	2	.....	Pierre	2	14.0
Topeka	6	.....	Rapid City	1	.....
Maine			Yankton	2	6.0
Farmington	4	.....	*Utah*		
Greenville	4	21.0	Cedar City	3	.....
Michigan			Logan	9	.....
Alpena	1	1.0	Moab	4	.....
Battle Creek	4	.....	Provo	2	.....
Cadillac	5	.....	Salt Lake City	2	.....
Escanaba	7	5.5	Watson	8	.....
Grand Haven	3	.....	*Vermont*		
Houghton	15	6.0	Bellows Falls	2	.....
Iron Mountain	10	.....	Northfield	4	.....
Lansing	6	.....	White River Junction	3	.....
Ludington	3	.....	*Washington*		
Munising	20	.....	Berne	38	.....
Port Huron	T.	8.0	Sullivan Lake	14	.....
Saginaw	3	.....	*West Virginia*		
Minnesota			Bayard	2	.....
Duluth	2	12.5	Elkins	1	0.0
Fort Ripley	5	.....	*Wisconsin*		
Grand Meadow	6	.....	Fond du Lac	11	.....
Minneapolis	3	.....	La Crosse	10	9.0
Montevideo	4	.....	Madison	9	.....
Worthington	3	.....	Medford	18	.....
Missouri			Milwaukee	2	.....
Brunswick	15	.....	*Wyoming*		
Rolla	2	.....	Casper	2	.....
St. Joseph	6	.....	Dome Lake	15	.....
St. Louis	T.	†	Newcastle	2	.....
Unionville	12	.....	South Pass City	9	.....

*Shore ice. †Floating ice. ‡Ice gorged. § Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., January 7, 1929



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SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 6 WASHINGTON, D. C., JANUARY 16, 1929 WINTER 1928-29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

At the beginning of the week the area of rising temperature advancing from the Northwest, referred to in the last issue, had reached the central valleys by Wednesday morning and a general rainy condition had appeared over the southern Plains. By the following morning this storm area had extended rapidly to the Great Plains and precipitation, mostly rain, had overspread all portions of the country from the Mississippi Valley eastward, except near the Florida Peninsula.

This storm area moved rapidly beyond the Canadian Maritime Provinces by Friday morning, and was quickly followed by another moving from the Canadian Northwest and central over Michigan at that time, attended by rather general, but light, snows from the Dakotas eastward to the Great Lakes, and was followed by anticyclonic conditions and much colder weather throughout the Northwest, while generally clear weather continued to dominate the Plateau and Pacific Coast States.

By Saturday morning the cold area over the Northwest had moved to the Lake region and Ohio Valley and a considerable area of warmth had followed, though the pressure remained high in the Canadian Provinces and low temperatures prevailed to the northward of the Great Lakes. At the 8 a. m. observation of Sunday, pressure had risen in the Dakotas and upper Mississippi Valley, and severe cold had overspread the upper Mississippi Valley, and a general cold wave was advancing into the Great Lakes region and Ohio Valley, with temperatures 10° or more below zero in central Iowa and ranging to 50° below zero in portions of Canada to northward of the Great Lakes.

At the end of the week the cold wave had covered the middle Atlantic coast and New England, but severe cold did not extend into the more southern districts. At the same time the anticyclone over the Plateau maintained its relative position and clear weather, with moderate temperatures, dominated all far-western districts till the end of the week, though threatening weather existed over most northern districts from the Rocky Mountains eastward with light snows in portions of the Missouri Valley and eastward to the Great Lakes.

The week, as a whole, exhibited marked variations in temperature over the different parts of the country, the mean of the week being markedly below normal in the Great Lakes and upper Mississippi Valley, correspondingly above normal over the eastern slope of the Rocky Mountains, and again below normal to westward and above normal in the extreme Northwest. The week was without important temperature variations in the more southern districts and was mainly warmer than normal.

DEPTH OF SNOW ON GROUND

No material change occurred in the snow-covered area, as compared with the conditions existing a week ago, though a small area from Kentucky northeastward to the New England coast, bare a week ago, now has a slight cover, and a similar small area in Nebraska and Kansas, covered last week, is now bare.

Snow was rather frequent over the Great Lakes and considerable falls occurred in the States from Minnesota and Iowa eastward to Michigan, and from northern Illinois to western Pennsylvania and over northern New York and New England.

In the western mountain districts there was little or no snow during the week, but on account of the prevailing coolness there was little loss from melting, so no important changes in the snow cover occurred, though there was a reduction of several inches in most districts, due probably to settling.

ICE IN RIVERS AND HARBORS

There were moderate increases in the amounts of ice reported over all districts where it had previously formed.

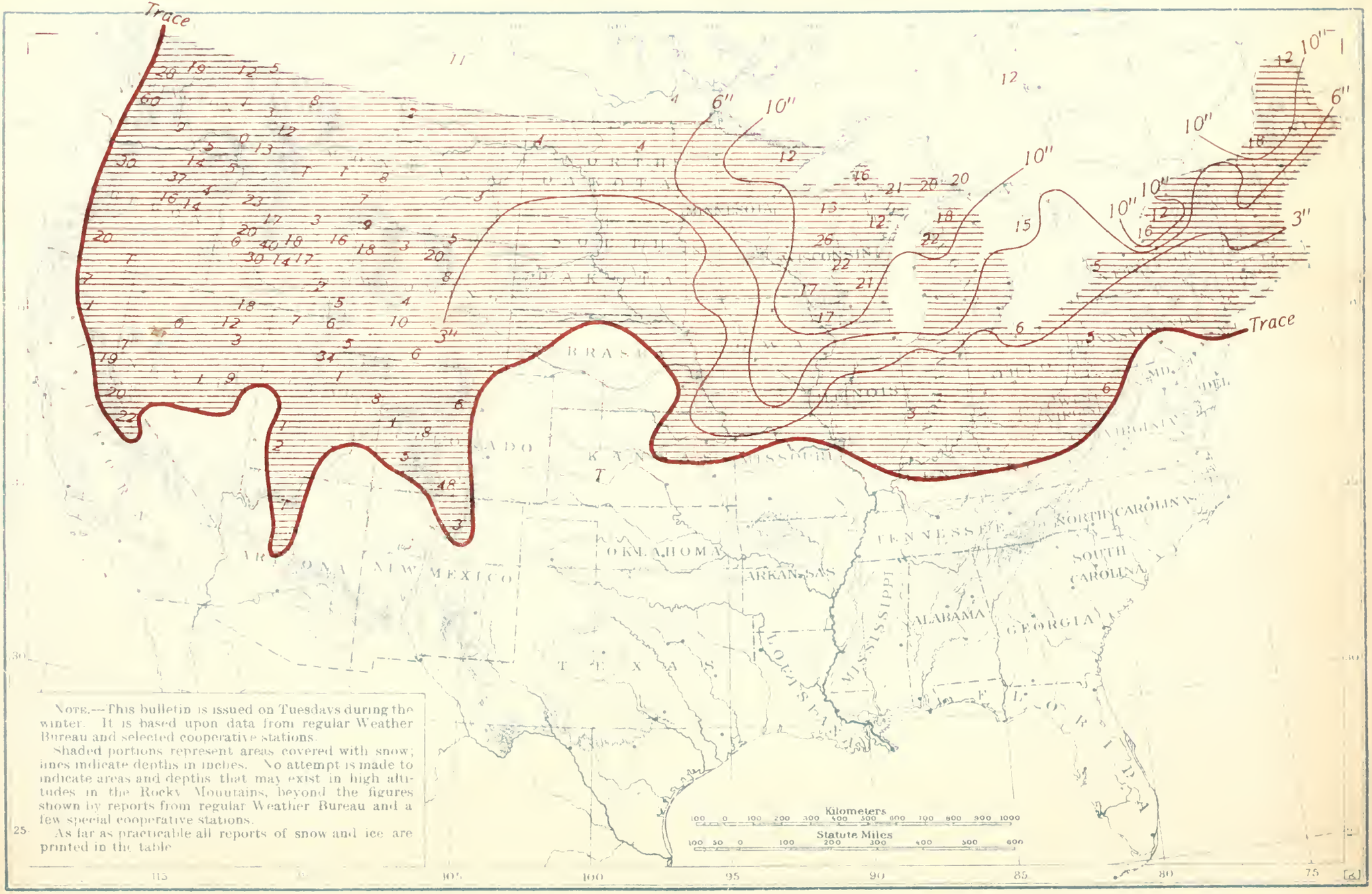
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., JANUARY 14, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*Nebraska*	*Inches*	*Inches*
Eagle	15	.....	Alliance	1	.....
Nome	8	.....	Norfolk	1	.....
Tanana	9	.....	Omaha	1	8.5
California			*Nevada*		
Huntington Lake	22	.....	Arthur	3	.....
Macumber	1	.....	Kimberly	9	.....
Norden	19	.....	North Fork	12	.....
Colorado			*New Hampshire*		
Dillon	6	.....	Durham	3	.....
Grand Junction	1	.....	Keene	5	.....
Leadville	4	.....	Pittsburg	18	.....
Idaho			*New York*		
Kellogg	3	.....	Albany	T.	4.0
Ketchum	18	.....	Alfred	1	.....
Mackay	9	.....	Buffalo	5	3.5
Pocatello	2	.....	Canton	1	.....
Shake Creek	30	.....	Cutchogue	1	.....
Vienna Mine	40	.....	Delhi	2	.....
Illinois			Jamestown	4	.....
Carlinville	2	.....	Lake Placid	5	.....
Chicago	6	.....	Lowville	8	.....
La Salle	3	.....	Syracuse	3	.....
Springfield	1	.....	*North Dakota*		
Indiana			Devils Lake	4	.....
Fort Wayne	3	.....	Williston	4	20.0
Indianapolis	1	.....	*Ohio*		
Madison	2	.....	Cleveland	4	4.0
Royal Center	1	.....	Dayton	1	†
Vincennes	2	.....	Zanesville	1	.....
Iowa			*Oregon*		
Dubuque	17	9.0	Baker	4	.....
Forest City	4	.....	Government Camp	30	.....
Sioux City	T.	17.5	Imperial Mine	37	.....
Waterloo	8	.....	Meacham	14	.....
Kentucky			*Pennsylvania*		
Louisville	T.	†	Franklin	2	.....
Maysville	1	.....	Johnstown	2	.....
Owensboro	1	.....	Philadelphia	T.	†
Maine			*Rhode Island*		
Eastport	5	0.0	Kingston	1	.....
Gardiner	6	8.0	Providence	1	0.0
Greenville	9	25.0	*South Dakota*		
Portland	3	0.0	Huron	1	13.0
Van Buren	12	.....	Pierre	1	14.5
Massachusetts			*Utah*		
Boston	3	0.0	Duchesne	1	.....
Concord	3	.....	Kelton	7	.....
Williamstown	3	.....	Silver Lake	34	.....
Michigan			*Vermont*		
Benzonia	22	.....	Brattleboro	6	9.0
Detroit	4	5.5	St. Johnsbury	5	.....
Grand Rapids	9	.....	*Washington*		
Humboldt	17	.....	Paradise Inn	60	.....
Marquette	21	3.0	Twisp	19	.....
Sault Ste. Marie	20	12.0	Walla Walla	5	.....
Sidnaw	20	.....	*West Virginia*		
Minnesota			Charleston	1	.....
Duluth	6	17.5	Clarksburg	2	.....
Leech Lake Dam	10	.....	Parkersburg	1	†
Moorhead	7	21.0	*Wisconsin*		
Mora	5	.....	Brodhead	11	.....
St. Paul	8	9.0	Green Bay	15	10.0
Missouri			Park Falls	13	.....
Brunswick	5	.....	Racine	6	.....
Hannibal	2	10.0	Wausau	17	15.0
Montana			*Wyoming*		
Dillon	2	.....	Alta	18	.....
Grant	3	.....	Sheridan	5	.....
Havre	2	.....	South Pass City	10	.....
Loweth	8	.....	Yellowstone Park	9	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., January 14, 1929



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SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 7 WASHINGTON, D. C., JANUARY 23, 1929 WINTER 1928-29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

At the morning observation of January 15 light snow was falling at points in the Lake region and thence eastward to northern New England, but otherwise the weather at the beginning of the week was generally fair, with moderately low temperatures, though with a tendency to rise over most districts from the Rocky Mountains eastward, the line of zero temperature extending southeastward to central Missouri, and the temperatures were generally low for the region west of the Rocky Mountains.

General, light precipitation, mostly rain, had set in over the Mississippi Valley and Gulf States by Wednesday morning, and by Thursday morning precipitation had extended into most districts from the Great Plains eastward save in southern Florida and portions of New England, the rain turning into snow over most northern districts.

At the morning observation of Friday a low pressure area was central in eastern Kansas and light precipitation had fallen to the eastward and northeastward as far as the Atlantic. At the same time a similar area from the Pacific Northwest had moved to central Idaho and local snows had fallen during the preceding 24 hours in most of the Rocky Mountain and Plateau States.

By Saturday morning the eastern precipitation area had extended into the St. Lawrence Valley, attended by heavy rains, thunderstorms, and high winds in portions of the Ohio Valley and lower Lake region and by snow in the upper Mississippi Valley. The western storm had moved southeastward to Colorado and precipitation had continued to some extent in the Rocky Mountain and Plateau regions and had extended into portions of California.

During Sunday precipitation continued in central and southern California and the southern Plateau, but elsewhere the weather had cleared and lower temperatures had overspread most central and eastern districts.

The average temperature for the week was decidedly low from the upper Lake region westward and southwestward to the Pacific coast, and it was correspondingly warm to the southward and eastward, the week being particularly warm in the Gulf States.

Precipitation was moderate and well distributed from the lower Lakes southward to the Gulf and along the Pacific coast.

DEPTH OF SNOW ON GROUND

No important amounts of snow occurred during the week over the districts to eastward of the Rocky Mountains, but in the western mountains there were some increases over the depths reported a week ago in nearly all districts, the falls being considerable and well distributed in the mountains of California and to the northward and in the adjacent areas of the Plateau regions, particularly in western Colorado, Utah, and northern Arizona.

The snow-covered area is somewhat reduced from the preceding week, a considerable area in the Ohio Valley and Middle Atlantic States, covered a week ago, now being bare, but in the western mountain districts it has increased slightly.

ICE IN RIVERS AND HARBORS

Due to continued cold from the upper Lakes westward, there were general increases in the ice thickness over the upper Missouri and upper Mississippi Rivers and their tributaries, and likewise in the harbors of Lake Superior; elsewhere the amounts of ice are practically everywhere less than reported a week ago.

Only floating ice is reported from the Ohio River and its principal tributaries, and the rivers of the Atlantic seaboard are mostly free of ice, except in their upper reaches, though the rivers of New England have slight increases over the amounts reported a week ago.

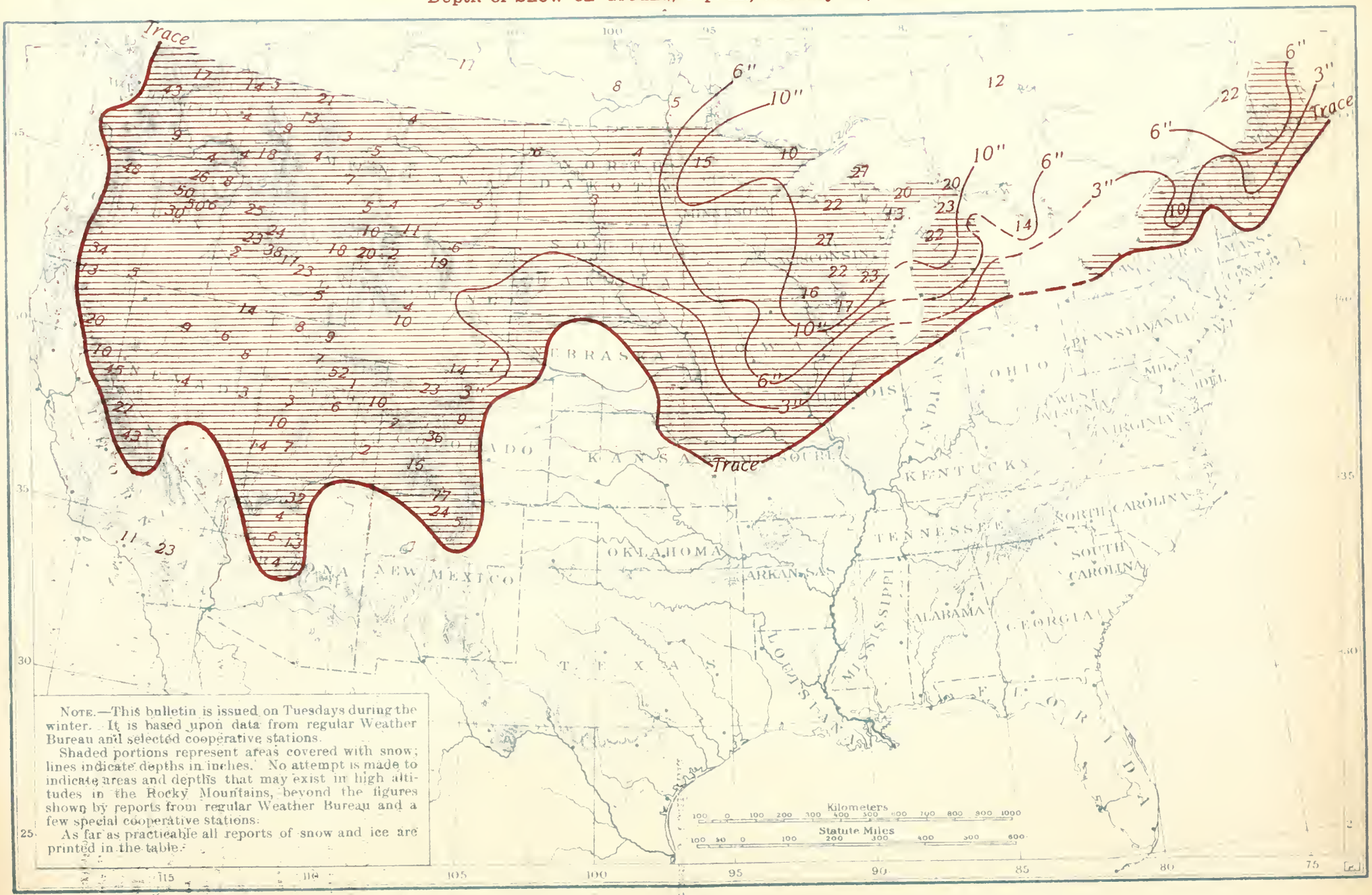
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., JANUARY 21, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*Montana*	*Inches*	*Inches*
Fort Yukon	30	.....	Belton	21	.....
Juneau	2	.....	Billings	3	.....
Nome	16	.....	Choteau	3	.....
Tanana	20	.....	Great Falls	5	.....
Arizona			Helena	7	.....
Bright Angel	32	.....	Kalispell	13	.....
Flagstaff	13	.....	Miles City	5	.....
Prescott	4	.....	Red Lodge	11	.....
Williams	6	.....	Stanford	2	.....
California			*Nevada*		
Blue Canyon	12	.....	Austin	4	.....
Huntington Lake	43	.....	Gold Creek	14	.....
McCloud	10	.....	McGill	3	.....
Mount Wilson	11	.....	Winnemucca	2	.....
Norden	45	.....	*New Hampshire*		
Relief	27	.....	Concord	1	12.0
Colorado			Keene	3	.....
Crested Butte	36	.....	Pittsburg	12	.....
Cumbres	77	.....	Woodsville	1	.....
Durango	6	.....	*New Mexico*		
Rico	16	.....	Chama	24	.....
Steamboat Springs	23	.....	Gascon	1	.....
Idaho			Tres Piedras	5	.....
Hailey	14	.....	*New York*		
Lewiston	4	*†	Herkimer	1	.....
McCall	25	.....	Malone	3	.....
Mascot Mine	23	.....	Ogdensburg	1	.....
Pierce City	18	.....	Old Forge	6	.....
Pocatello	5	.....	Saranac Lake	3	.....
Vienna Mine	38	.....	*Oregon*		
Illinois			Baker	6	.....
Chicago	2	.....	Fish Lake	34	.....
La Salle	2	.....	Imperial Mine	50	.....
Peoria	1	9.0	Lakeview	5	.....
Waukegan	5	.....	Olive Lake	30	.....
Iowa			Wallowa	8	.....
Atlantic	4	.....	*South Dakota*		
Charles City	10	.....	Pierre	3	18.0
Des Moines	7	8.0	Rapid City	1	.....
Estherville	3	.....	Yankton	T.	13.0
Iowa Falls	9	.....	*Utah*		
Keokuk	4	14.5	Deseret	3	.....
Sioux City	T.	20.0	Logan	9	.....
Maine			Manti	5	.....
Gardiner	T.	11.0	Modena	14	.....
Houlton	3	.....	Price	6	.....
Millinocket	10	.....	Salt Lake City	7	.....
Michigan			Silver Lake	52	.....
Alpena	10	0.0	*Vermont*		
Battle Creek	2	.....	Brattleboro	0	12.5
Cassopolis	2	.....	Northfield	2	.....
East Jordan	20	.....	*Washington*		
Escanaba	13	13.5	Berne	43	.....
Grayling	21	.....	Spokane	4	.....
Houghton	27	8.0	Sullivan Lake	14	.....
Ironwood	24	.....	Twisp	17	.....
Ludington	9	.....	Yakima	9	.....
Mackinaw	23	.....	*Wisconsin*		
Port Huron	T.	12.0	Ashland	12	.....
Minnesota			La Crosse	16	16.0
Duluth	9	20.0	Madison	17	.....
Ely	10	.....	Spooner	9	.....
Leech Lake Dam	12	.....	Stevens Point	22	.....
Mankato	7	.....	*Wyoming*		
Minneapolis	6	.....	Barnum	4	.....
Moorhead	10	24.5	Cody	2	.....
Thief River Falls	15	.....	Dixon	6	.....
Missouri			Foxpark	14	.....
Maryville	3	.....	Lander	4	.....
St. Joseph	1	.....	Wheatland	1	.....

*Shore ice. †Floating ice. ‡Ice gorged. § Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., January 21, 1929



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SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 8 WASHINGTON, D. C., JANUARY 30, 1929 WINTER 1928-29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

The period from January 22 to 28, inclusive, was marked by severe cold over the Northwest and much inclement weather, with heavy snows in portions of the upper Mississippi Valley and near-by portions of the Lake region.

At the beginning high barometric pressure had overspread the upper Missouri Valley and temperatures below zero had extended to southern Wyoming, and severe cold covered the eastern Canadian Provinces. It was warmer over the central valleys, however, and rain was falling in the middle Mississippi and lower Ohio Valleys, with local snows in the northern Rocky Mountains and to the eastward over the Dakotas.

By Wednesday morning precipitation had overspread most districts from the Mississippi Valley eastward and local snows still persisted in portions of the northern Rocky Mountains, with colder weather over the central valleys.

At the morning observation of Thursday low pressure prevailed over the southern mountain and Great Plains regions and precipitation, mostly snow, had again set in over the middle Plains, extending eastward as rain into the lower Ohio Valley and northern Gulf States. By the following morning the storm area had extended to the Lake region, with greatly increased intensity, attended by general rains over most eastern districts and by heavy snows and occasional sleet in portions of the upper Lake region and near-by areas of the upper Mississippi Valley, and severe cold continued in the Northwest, the line of zero temperatures extending southward as far as northern Kansas and into the upper Mississippi Valley. By Saturday morning the weather had cleared over most eastern districts, with a decided lowering of the temperatures, cold weather continuing in the Northwest, with temperatures ranging from zero in Nebraska to 40° or more below in Manitoba and other near-by Canadian Provinces.

The latter part of the week had local precipitation in the far Northwest, with more or less snow in the western mountain regions, and at the close rain was rather general in the Gulf States and rain or snow in most districts to the northward, with cold weather continuing in the Northwest.

For the week, as a whole, the average temperatures ranged from 10° to 30° below normal from the upper Mississippi Valley westward to Idaho and eastern Washington, and they were generally below normal in all districts, except from the lower Ohio Valley southward to the Gulf and in southern Texas.

DEPTH OF SNOW ON GROUND

All parts of the country where snow had previously accumulated to some extent showed increased depth over the preceding week, save in the Southwest where the accumulated depths are less than reported last week and generally less than the normal depth for this period of the winter.

From the mountains of Washington, Oregon, and northern Utah eastward the snow depths are nearly everywhere greater than reported last week, and in the upper Mississippi Valley and over the upper Lakes the amounts are substantially greater, the weekly falls ranging from 5 to 15 inches, with somewhat less over the districts to the eastward.

The snow-covered area from the Ohio Valley eastward increased to some extent during the week, but elsewhere no important changes occurred.

ICE IN RIVERS AND HARBORS

The amount of ice increased to some extent in all rivers and harbors of the northern districts, but harvest was delayed somewhat by the severe cold in portions of the Northwest, though in most eastern districts it is progressing satisfactorily.

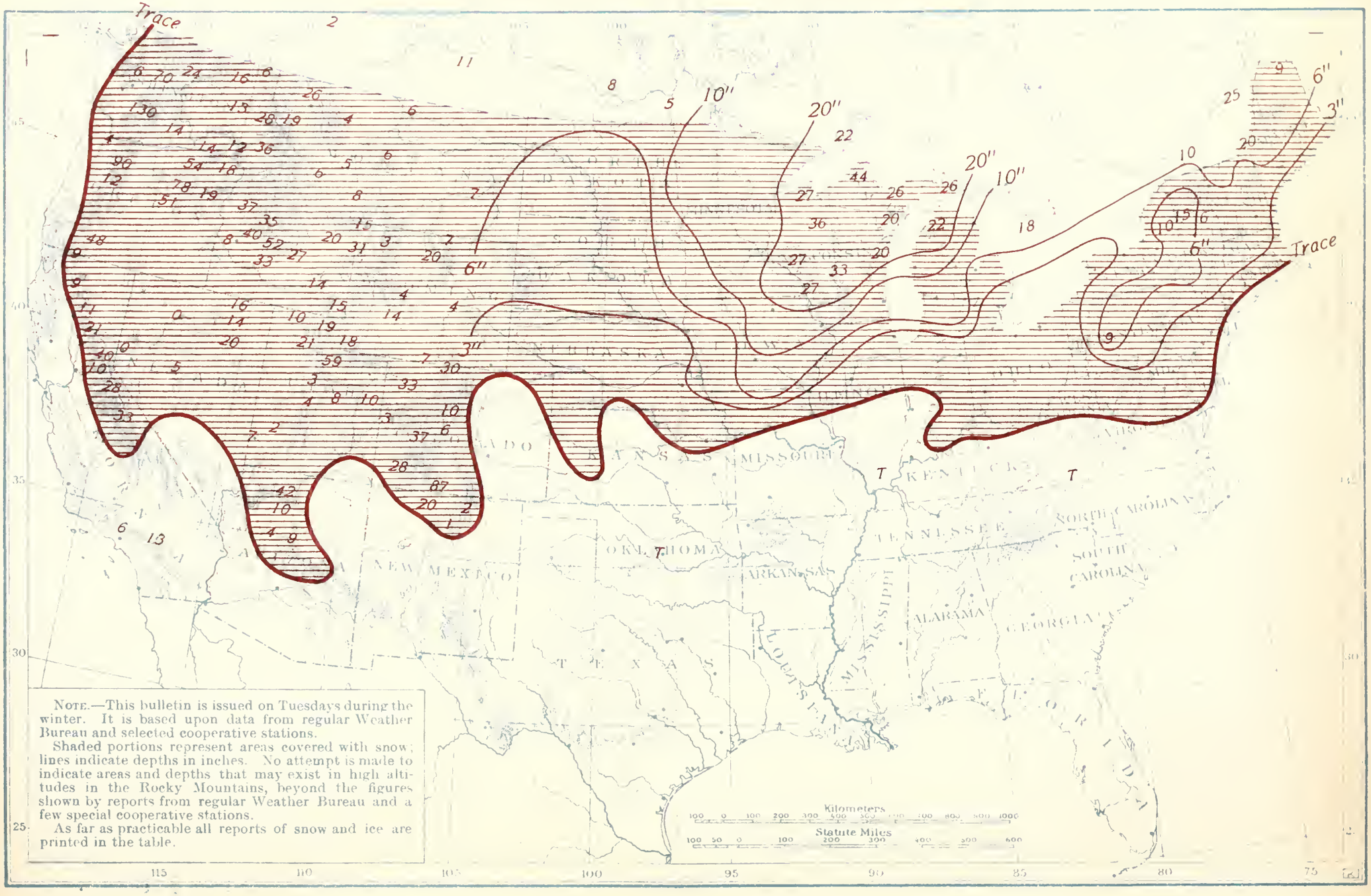
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., JANUARY 28, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
California	*Inches*	*Inches*	*New Hampshire*	*Inches*	*Inches*
Inskip	21	.....	Concord	4	13.0
Relief	28	.....	Hanover	3	.....
Squirrel Inn	13	.....	Lancaster	2	.....
Colorado			*New Jersey*		
Cumbres	87	.....	Cape May	1	.....
Grand Junction	3	.....	Newton	1	.....
Steamboat Springs	33	.....	*New York*		
Idaho			Alfred	4	3.0
Boise	8	.....	Beaver River	15	.....
Idaho City	40	.....	Binghamton	4	.....
Montpelier	15	.....	Buffalo	2	8.0
Pocatello	14	.....	Dansville	2	.....
Soldier Creek	33	.....	Jeffersonville	6	.....
Illinois			Poughkeepsie	2	.....
Freeport	9	.....	Rochester	3	1.5
Monmouth	3	.....	Rome	3	.....
Peoria	1	10.5	Warwick	4	.....
Indiana			*North Dakota*		
Angola	2	.....	Bismarck	4	26.0
Collegeville	2	.....	Williston	6	27.0
Notre Dame	1	.....	*Ohio*		
Iowa			Ashland	3	.....
Albia	5	.....	Columbus	2	0.0
Davenport	2	14.0	Toledo	2	13.0
Dubuque	16	14.0	*Oregon*		
Iowa City	9	.....	Detroit	12	.....
Marshalltown	11	.....	Harrison Mine	78	.....
Pocahontas	4	.....	Portland	4	0.0
Maine			Siskiyou	9	.....
Farmington	9	.....	Welches	16	.....
Greenville	8	28.0	*Pennsylvania*		
Portland	1	0.0	Chambersburg	3	.....
Massachusetts			Harrisburg	1	†
Boston	3	0.0	Huntingdon	4	.....
Holyoke	4	1.0	Scranton	1	.....
Williamstown	3	.....	State College	3	.....
Michigan			Towanda	5	.....
Ann Arbor	1	.....	Warren	4	.....
Bloomingdale	12	.....	*South Dakota*		
Detroit	2	11.0	Huron	4	19.0
Grand Haven	8	.....	Yankton	3	18.0
Houghton	44	8.0	*Utah*		
Iron Mountain	17	.....	Cedar City	2	.....
Lansing	8	.....	Ogden	21	.....
Marquette	23	7.0	Provo	3	.....
Munising	26	.....	Watson	10	.....
Sault Ste. Marie	26	16.0	*Vermont*		
Minnesota			Burlington	1	*
Collegeville	12	.....	Northfield	4	.....
Duluth	20	22.5	*Virginia*		
Grand Meadow	20	.....	Dale Enterprise	1	.....
Moorhead	12	26.0	Fredericksburg	1	.....
Roseau	12	.....	*Washington*		
Worthington	10	.....	Paradise Inn	130	.....
Missouri			Seattle	6	0.0
Hannibal	1	*	Sullivan Lake	16	.....
Kansas City	1	16.0	Walla Walla	14	.....
Unionville	14	.....	*Wisconsin*		
Montana			Eau Claire	27	.....
Bozeman	8	.....	Fond du Lac	32	.....
Haugan	31	.....	Green Bay	20	12.0
Havre	6	.....	La Crosse	27	18.0
Miles City	7	.....	Milwaukee	8	.....
Philipsburg	6	.....	Wausau	26	19.0
Thompson Falls	19	.....	*Wyoming*		
Nebraska			Casper	4	.....
Auburn	5	.....	Dome Lake	20	.....
McCook	1	.....	Newcastle	3	.....
O'Neill	2	.....	Sheridan	7	.....
Valentine	3	.....	Yellowstone Park	15	.....

*Shore ice. †Floating ice. ‡Ice gorged. § Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., January 28, 1929



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As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 9 WASHINGTON, D. C., FEBRUARY 6, 1929 WINTER 1928-29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

Severe cold again prevailed over the Northwest, as during the preceding week, though the temperatures were not so low, but the cold area extended into all districts from the Rocky Mountains eastward where, in the more eastern and southern districts, moderate temperatures existed last week.

The week opened with high pressure over the upper Mississippi Valley and with a storm entering the north Pacific coast. This storm advanced southeastward to Colorado by Wednesday morning, attended by more or less precipitation, mostly snow, over the far Northwest and the northern mountain districts, extending eastward into the lower Missouri and middle Mississippi Valleys and Lake region. During the following day the weather cleared in most western districts, but light snow continued in the Lake region and extended southward into the Ohio Valley, the weather becoming much colder from the northern mountain regions southeastward to Kansas and Missouri.

By Friday the cold area had advanced into the Mississippi and Ohio Valleys and southward, the line of freezing reaching the middle Gulf coast, with prospects of heavy frosts in northern Florida. At the same time rain or snow had again overspread the far Northwest.

By Saturday morning the precipitation area in the West had overspread nearly all districts west of the Rocky Mountains, heavy falls of rain being reported from points in central California, and heavy snow added considerable to the depth of stored snow in the mountains of that and portions of near-by States.

Local precipitation continued Sunday in some western mountain sections, and snow or rain occurred over considerable areas in the Mississippi Valley and middle Gulf States where local light precipitation, mostly snow, again occurred Monday, and at the close of the week precipitation, mostly light snow, was falling over a wide area in the central valleys and western mountains.

The week, as a whole, continued cold over the far Northwest and in practically all districts from the Rocky Mountains eastward, but in the middle and southern Plateau the week was moderately warmer than normal. Precipitation was generally light over all districts, except near the Pacific coast where beneficial falls occurred in California and some near-by areas.

DEPTH OF SNOW ON GROUND

Compared with the preceding week, there were moderate increases in the snow depth from central Minnesota southward over Iowa and Missouri and thence eastward over much of Illinois and Indiana, and from western New York to northern Maine.

In the mountains of the far West increases in depth were reported locally in the northern area and in the mountains of California and near-by portions of the Plateau, but from Colorado southwestward to the mountains of Arizona and southern California there was important melting and the snow depths were materially reduced. Similar conditions existed in the upper Lake region and some near-by areas. The snow-covered area remained about as reported a week ago.

ICE IN RIVERS AND HARBORS

Over all northern parts of the country there were generally important increases in the thickness of ice on the rivers and harbors, though the Ohio is still open from Pittsburgh down, but above that point its tributaries were mostly frozen.

Some ice is reported on the Potomac, and to the northward 8 inches is reported at Harrisburg on the Susquehanna, 9 inches on the Hudson at Albany, and 34 inches in central Maine.

Harvesting has begun in most districts where ice is usually gathered.

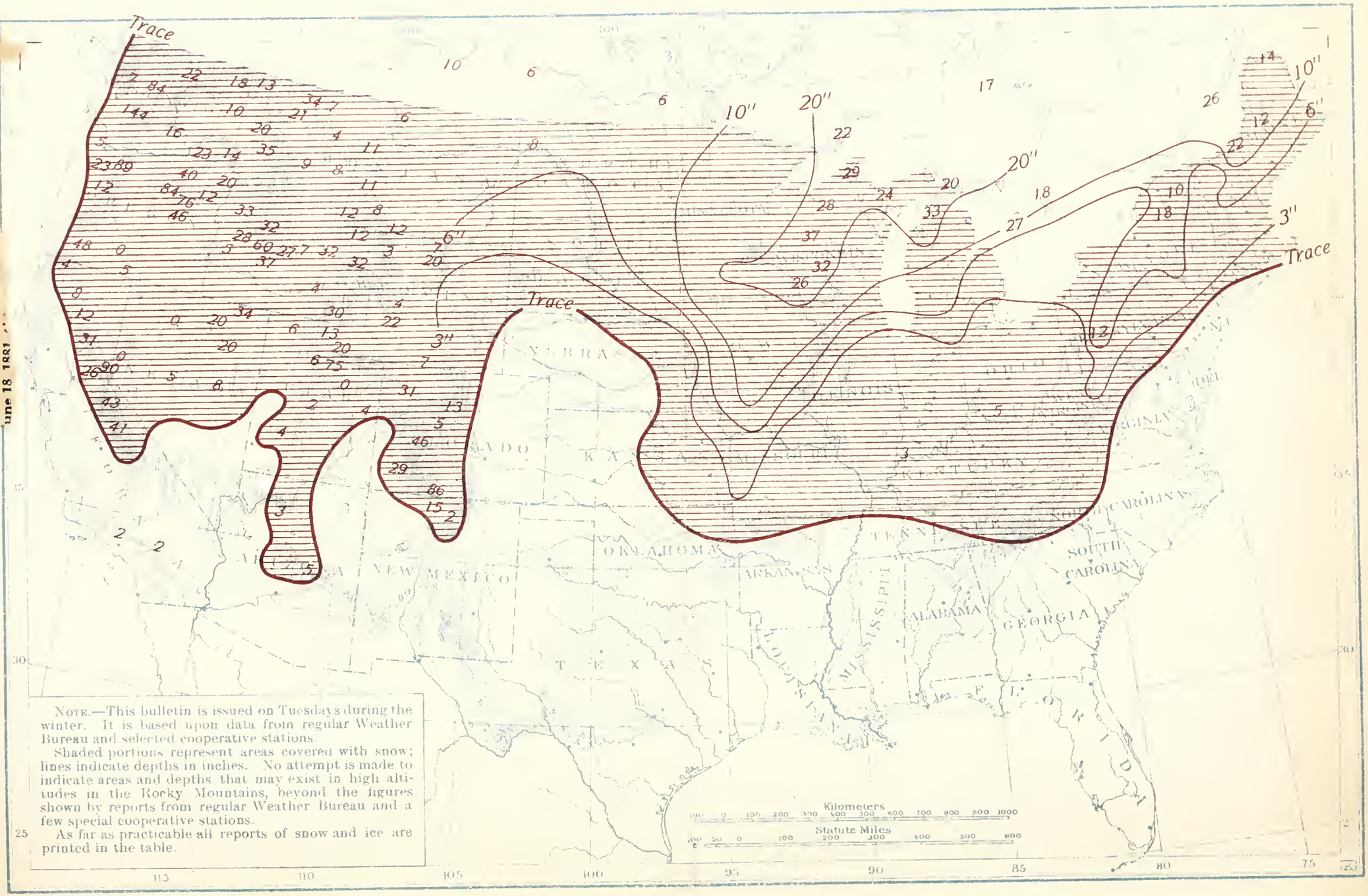
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 4, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*Nebraska*	*Inches*	*Inches*
Eagle	27	.....	Auburn	6	.....
Juneau	9	.....	Omaha	1	12.0
California			*Nevada*		
Blue Canyon	25	.....	Arthur	20	.....
Huntington Lake	41	.....	Kimberly	8	.....
McCloud	8	.....	North Fork	20	.....
Norden	90	.....	*New Mexico*		
Colorado			Chama	15	.....
Crested Butte	46	.....	Tres Piedras	2	.....
Dillon	13	.....	*New York*		
Leadville	5	.....	Albany	3	9.0
Rico	29	.....	Delhi	8	.....
Connecticut			Ithaca	7	.....
Hartford	1	†	Lake Placid	10	.....
West Cornwall	7	.....	Oswego	6	10.5
Idaho			Watertown	2	.....
Hailey	21	.....	*North Carolina*		
Kellogg	20	.....	Asheville	T.	.....
Lewiston	14	*†	Greensboro	3	.....
Spencer	32	.....	*North Dakota*		
Vienna Mine	60	.....	Devils Lake	4	.....
Illinois			Ellendale	6	.....
Cairo	2	†	*Ohio*		
Chicago	2	.....	Cleveland	1	6.0
New Burnside	2	.....	Dayton	1	†
Urbana	1	.....	Wauseon	3	.....
Indiana			Zanesville	1	.....
Evansville	3	0.0	*Oregon*		
Fort Wayne	1	.....	Government Camp	89	.....
Marion	2	.....	Meacham	40	.....
Royal Center	2	.....	Portland	5	0.0
Iowa			*Pennsylvania*		
Carroll	4	.....	Bellefonte	3	.....
Forest City	12	.....	Confluence	2	.....
Sioux City	2	30.5	Franklin	2	.....
Waterloo	16	.....	Gettysburg	2	.....
Kansas			Harrisburg	T.	8.0
Iola	2	0.0	Johnstown	12	.....
Osage City	2	.....	*South Dakota*		
Topeka	2	.....	Huron	6	21.0
Maine			Rapid City	2	.....
Eastport	5	0.0	*Utah*		
Gardiner	6	15.0	Kelton	6	.....
Van Buren	14	.....	Milford	4	.....
Massachusetts			Silver Lake	75	.....
Concord	5	.....	Watson	4	.....
Nantucket	T.	0.5	*Vermont*		
Michigan			Burlington	3	*
Battle Creek	6	.....	Rutland	4	.....
Benzonia	19	.....	St. Johnsbury	9	.....
Escanaba	17	21.0	*Washington*		
Mount Pleasant	7	.....	Paradise Inn	144	.....
Newberry	22	.....	Tacoma	6	0.0
Port Huron	3	18.0	Walla Walla	23	.....
Sidnaw	24	.....	*West Virginia*		
Minnesota			Bayard	5	.....
Baudette	10	.....	Charleston	2	.....
Montevideo	12	.....	Elkins	1	0.0
Mora	12	.....	Fairmont	1	.....
St. Paul	11	9.0	*Wisconsin*		
Virginia	17	.....	Brodhead	17	.....
Missouri			La Crosse	26	18.0
Brunswick	10	.....	Medford	37	.....
Rolla	4	.....	Milwaukee	7	.....
St. Louis	1	†	Wausau	22	21.0
Montana			*Wyoming*		
Big Timber	8	.....	Alta	32	.....
Browning	7	.....	Evanston	20	.....
Kalispell	21	.....	South Pass City	22	.....
Missoula	9	.....	Yellowstone Park	12	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., February 4, 1929



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As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 10 WASHINGTON, D. C., FEBRUARY 13, 1929 WINTER 1928–29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

The week opened with local light snows in portions of the middle Rocky Mountains and northern Plains and with snow or rain in the middle Mississippi and lower Ohio Valleys and to the southward, and with comparatively low temperatures continuing in the Dakotas and upper Missouri Valley.

By Wednesday morning a low-pressure area that had developed over the middle Rocky Mountains during the preceding day had moved rapidly to western Florida and light snow, rain, or sleet had fallen from that region eastward and southeastward to the middle and south Atlantic coasts. Within the following 24 hours the eastern area of precipitation had extended northeastward to New England, with local heavy rains over the Atlantic Coast States, and a new area of precipitation, mostly light snow, had overspread the Southern Rocky Mountains and to the northeastward as far as the middle Plains and upper Mississippi Valley. By Friday morning the precipitation area had extended eastward to the Lake region, lower Ohio, and lower Mississippi Valleys, and colder weather had advanced behind it.

During Saturday and Sunday the precipitation area extended into all Atlantic coast districts, and cold weather advanced eastward, freezing temperatures being reported to the middle and western Gulf coasts, and low temperatures prevailed in the far Southwest, though there was appreciable warming over the Northwest and eastward to the Great Plains.

The closing days of the week were clear over all districts, except locally along the Atlantic coast, and moderate temperatures prevailed in most districts, though it continued cold over the Plateau and western mountain districts.

For the week, as a whole, unusual cold persisted in the far Northwest and over the adjacent mountain and Plateau regions, the weekly averages of temperature ranging from 20° to 30° below the normal. In portions of Washington, Idaho, and Oregon the minimum temperatures at times during the week were the lowest ever recorded in February. Over the remaining sections of the West low average temperatures were recorded, and this condition extended to all other portions of the country save the more northeastern parts and along the Atlantic coast.

Precipitation was exceedingly light over the greater part of the country, but particularly so over the Pacific Coast States.

DEPTH OF SNOW ON GROUND

Compared with the preceding week, there is a slight increase in snow depth over almost all districts where snow was reported last week from the Rocky Mountains eastward, save over a narrow area from West Virginia northeastward to southern New England and locally in the upper Lake region. West of the Rocky Mountains there were some important increases in the mountains of Arizona, New Mexico, Colorado, and Utah, but otherwise in the mountains of the Plateau and Pacific States the depth of snow decreased to a small extent.

The snow-covered area remains largely as reported a week ago, save that a considerable area in the central Plains, bare then, now has a moderate cover.

Fortunately the more important northern winter-wheat areas are now fairly snow-covered and have been during the prevalence of the severe cold, particularly in the far western districts.

ICE IN RIVERS AND HARBORS

The continued cold over the western areas favored a continued increase of ice in the rivers and lakes of that region, but over the Atlantic Coast States little new ice formed.

Continued cold, without important precipitation, favored ice harvest in nearly all districts where it is usually gathered.

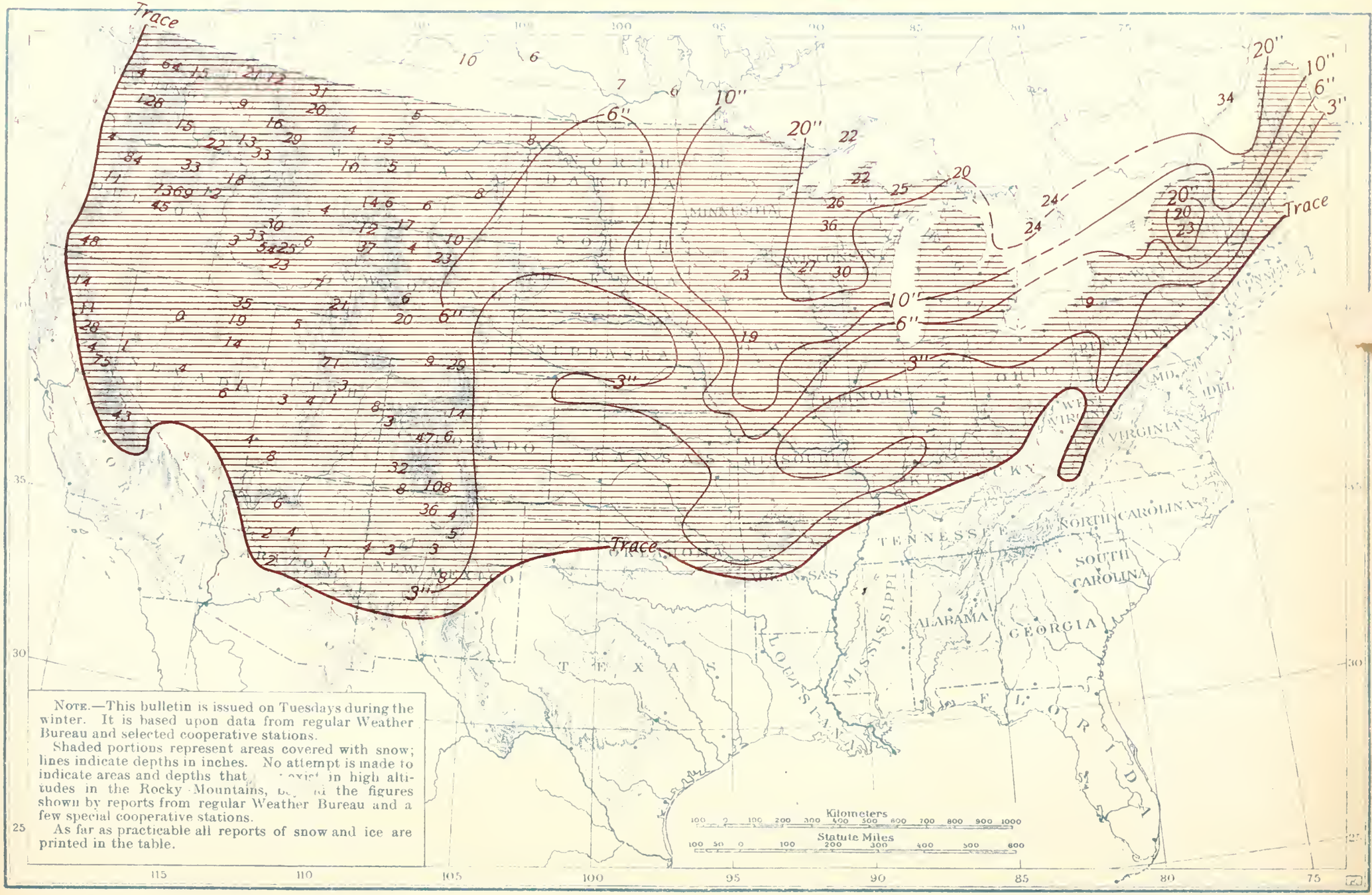
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 11, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Arizona	*Inches*	*Inches*	*New Hampshire*	*Inches*	*Inches*
Flagstaff	4	.....	Concord	2	13.0
Grand Canyon	6	.....	Pittsburg	24	.....
Prescott	2	.....	Woodsville	4	.....
Arkansas			*New Mexico*		
Fort Smith	4	0.0	Corona	8	.....
California			Gamerco	4	.....
Inskip	28	.....	Santa Fe	3	.....
Macumber	11	.....	Taos	4	.....
Norden	75	.....	*New York*		
Colorado			Buffalo	5	9.0
Cumbres	108	.....	Canton	9	.....
Durango	8	.....	Fredonia	5	.....
Grand Junction	3	.....	Jamestown	9	.....
Idaho			Lowville	8	.....
Ketchum	25	.....	Plattsburg	6	.....
Pierce City	33	.....	Rochester	3	6.0
Pocatello	7	.....	Saratoga Springs	4	.....
Illinois			Syracuse	5	.....
Griggsville	2	.....	*North Dakota*		
Monmouth	6	.....	Bismarck	4	32.0
Peoria	3	9.0	Williston	8	31.5
Iowa			*Ohio*		
Charles City	15	.....	Charlestown	6	.....
Des Moines	9	16.0	Cincinnati	1	†
Dubuque	12	20.0	Cleveland	2	6.0
Estherville	10	.....	Delaware	5	.....
Iowa Falls	19	.....	Sandusky	6	11.0
Keokuk	6	19.0	Tiffin	5	.....
Kentucky			Wilmington	5	.....
Louisville	1	†	*Oregon*		
Owensboro	3	.....	Baker	12	.....
Maine			Fish Lake	46	.....
Greenville	16	31.0	Imperial Mine	69	.....
Houlton	9	.....	*Pennsylvania*		
Portland	1	0.0	Beaver Falls	1	.....
Michigan			Huntingdon	4	.....
Cadillac	11	.....	Parkers Landing	2	.....
East Tawas	15	.....	State College	2	.....
Grand Rapids	10	.....	Warren	5	.....
Houghton	22	15.0	*South Dakota*		
Ironwood	26	.....	Pierre	4	29.0
Sault Ste. Marie	13	17.0	Yankton	3	21.0
Minnesota			*Utah*		
Duluth	15	23.5	Duchesne	3	.....
Fort Ripley	13	.....	Manti	4	.....
Mankato	23	.....	Modena	4	.....
Minneapolis	12	.....	Price	1	.....
Moorhead	10	29.0	*Vermont*		
Thief River Falls	19	.....	Brattleboro	9	15.0
Missouri			Burlington	7	3.0
Clinton	3	.....	Northfield	18	.....
Columbia	2	.....	White River Junction	11	.....
Kansas City	5	13.0	*Washington*		
Mountain Grove	8	.....	Berne	64	.....
Springfield	3	.....	Seattle	4	0.0
Montana			Spokane	9	.....
Dillon	4	.....	Twisp	15	.....
Helena	10	.....	Yakima	15	.....
Kalispell	20	.....	*Wisconsin*		
Miles City	8	.....	Green Bay	18	11.5
Red Lodge	17	.....	La Crosse	25	18.0
Nebraska			Park Falls	36	.....
Guide Rock	4	.....	Racine	10	.....
Imperial	5	.....	*Wyoming*		
Lincoln	2	.....	Barnum	2	.....
North Platte	2	.....	Cody	4	.....
Nevada			Dixon	9	.....
Arthur	14	.....	Foxpark	29	.....
Gold Creek	35	.....	Lander	6	.....
Reno	1	.....	Sheridan	10	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., February 11, 1929



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SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 11 WASHINGTON, D. C., FEBRUARY 20, 1929 WINTER 1928-29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

The week just closed continued cold over the greater part of the country, though the mean temperatures were not so low as during the preceding week, and there was a continued lack of precipitation in the Pacific States, where this period usually brings important snows or rains.

The only important precipitation of the week occurred on the 15th and 16th, when comparatively heavy rain fell from the lower Mississippi Valley northeastward and eastward to the Atlantic coast districts from Virginia to northern Florida. The amounts ranged from 2 to nearly 4 inches over a narrow area from southern Alabama to the coast of the Carolinas, and local, heavy precipitation was reported from Los Angeles, Calif., and in the near-by mountains on the morning of the 19th.

Local snows were reported from the northern districts on several dates, particularly on the 16th and 17th over nearly all portions of the northern border and into the adjacent Canadian Provinces, and to some extent snow continued during the 18th and 19th over the districts somewhat southward, the falls being fairly heavy in portions of the middle Plains and to the eastward over the Ohio Valley and lower Lake region by the close of the week.

The mean temperature of the week ranged from 6° to 10° or more below normal over nearly the entire western two-thirds of the country, but a small area over the Northeastern States, as in the preceding week, had weekly values slightly above the normal.

DEPTH OF SNOW ON GROUND

A fairly good snow cover still remains over all mountain districts of the West and from the northern Rocky Mountains eastward to New England, depths ranging from 10 to 40 inches or more being reported over the upper Mississippi Valley and upper Lake region and from 5 to 15 inches or more over the northern portions of New York and New England. Southward of these areas the snow depths decreased rapidly and only minor depths, ranging up to a few inches, are found in the remainder of the snow-covered areas.

Compared with the preceding week, there are general increases over most areas from Montana and Wyoming eastward to and including the Lake region, and locally over northern New England. Elsewhere east of the Rocky Mountains the depths are now almost everywhere less than reported a week ago, and over the western mountain regions similar conditions exist, the decreases ranging up to 10 or 15 inches in portions of central California, northern New Mexico, and western Colorado, and in the mountains of Oregon and Washington.

ICE IN RIVERS AND HARBORS

Over all northern districts, except the interior of Maine, there was a very general increase in the amount of ice as compared with the measurements reported a week ago, the increases being particularly large over the harbors of the Great Lakes, except at Oswego, N. Y., where there is now less. Over the main rivers there have been few increases, despite the generally cold weather, and in the lower Missouri and near-by parts of the Mississippi there is generally less ice than reported a week ago. Only floating ice is reported in the Ohio from Pittsburgh down, and the rivers of the Atlantic coast from central New England southward have now less ice than a week ago.

The weather was mostly favorable for ice harvest.

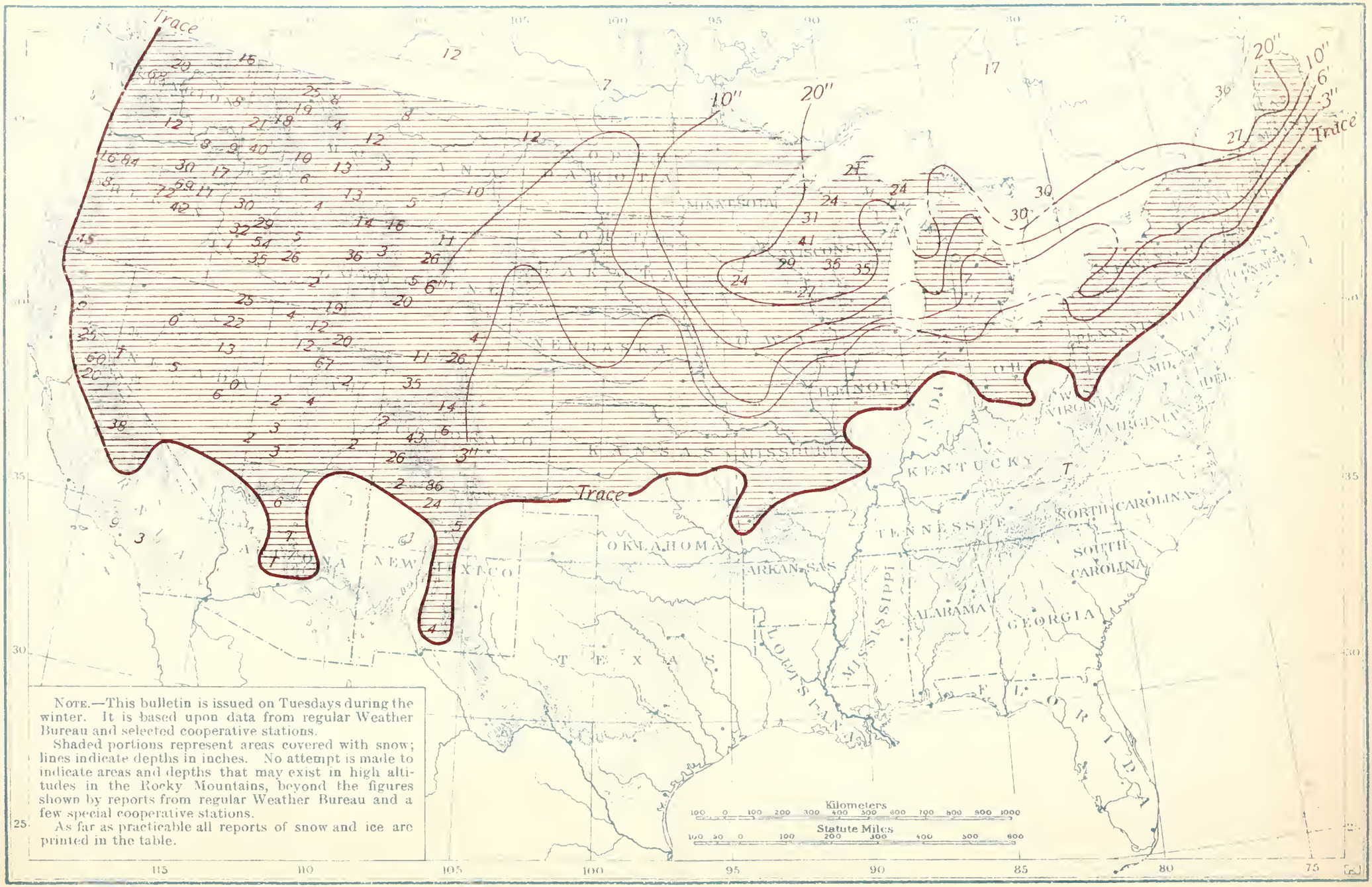
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 18, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*Nevada*	*Inches*	*Inches*
Barrow	3	.....	Austin	5	.....
Fort Yukon	30	.....	Kimberly	6	.....
Juneau	3	.....	North Fork	22	.....
California			*New Hampshire*		
Mount Wilson	9	.....	Hanover	9	.....
Norden	60	.....	Keene	2	.....
Sierraville	4	.....	*New Mexico*		
Colorado			Chacon	5	.....
Crested Butte	43	.....	Chama	24	.....
Cumbres	86	.....	Cloudcroft	4	.....
Leadville	6	.....	*New York*		
Steamboat Springs	35	.....	Albany	1	9.0
Idaho			Buffalo	2	11.0
Kirkham	29	.....	Herkimer	6	.....
McCall	30	.....	Jeffersonville	2	.....
Mackay	5	.....	Malone	6	.....
Soldier Creek	35	.....	Norwich	4	.....
Vienna Mine	54	.....	Old Forge	21	.....
Illinois			Oswego	10	11.0
Freeport	8	.....	Saranac Lake	3	.....
Peoria	T.	6.5	*North Dakota*		
Waukegan	2	.....	Bismarck	5	33.5
Indiana			Devils Lake	4	.....
Notre Dame	1	.....	Ellendale	6	.....
Iowa			*Ohio*		
Atlantic	8	.....	Ashland	2	.....
Davenport	2	19.0	Delaware	1	.....
Iowa City	5	.....	Toledo	1	13.0
Pocahontas	10	.....	Wauseon	5	.....
Sioux City	2	26.5	*Oregon*		
Maine			Austin	42	.....
Gardiner	7	16.0	Baker	11	.....
Greenville	14	31.0	Harrison Mine	72	.....
Millinocket	25	.....	Olive Lake	34	.....
Michigan			Wallowa	17	.....
Alpena	7	22.0	Welches	16	.....
Cassopolis	3	.....	*Pennsylvania*		
Detroit	4	14.0	Erie	2	12.0
Iron Mountain	14	.....	Franklin	2	.....
Lansing	8	.....	Johnstown	1	.....
Ludington	14	.....	*South Dakota*		
Marquette	20	16.0	Huron	7	26.0
Munising	24	.....	Rapid City	3	.....
Saginaw	4	.....	*Utah*		
Minnesota			Deseret	2	.....
Duluth	16	27.5	Logan	12	.....
Ely	16	.....	Moab	2	.....
Leech Lake Dam	18	.....	Silver Lake	67	.....
Roseau	9	.....	*Vermont*		
St. Paul	15	8.5	Brattleboro	4	16.0
Worthington	19	.....	Burlington	5	7.5
Missouri			Northfield	11	.....
Hannibal	T.	13.0	*Washington*		
Unionville	12	.....	Sullivan Lake	16	.....
Montana			Walla Walla	8	.....
Belton	35	.....	*Wisconsin*		
Billings	5	.....	Ashland	19	.....
Choteau	4	.....	Fond du Lac	35	.....
Great Falls	12	.....	Madison	18	.....
Havre	8	.....	Spooner	14	.....
Helena	13	.....	Stevens Point	36	.....
Stanford	3	.....	Wausau	16	26.0
Thompson Falls	18	.....	*Wyoming*		
Nebraska			Alta	36	.....
Broken Bow	4	.....	Casper	3	.....
Lodgepole	1	.....	Dome Lake	26	.....
Norfolk	2	.....	Evanston	20	.....
Omaha	1	24.0	Newcastle	4	.....
O'Neill	6	.....	South Pass City	20	.....
Valentine	4	.....	Yellowstone Park	14	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., February 18, 1929



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As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 12 WASHINGTON, D. C., FEBRUARY 27, 1929 WINTER 1928–29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

The week just closed continued colder than normal, as has been the case for several weeks past, and precipitation was rather widespread over the eastern half, but there was a general absence of important precipitation in the far West.

At the beginning snow was falling over a considerable area from the middle Plains eastward to the Ohio Valley and lower Lake region and from thence northeastward over the St. Lawrence Valley, with some sleet or rain along the southern edge of the precipitation area. During Wednesday the precipitation area extended eastward and southward, embracing nearly all districts except southern Florida, continuing with increasing intensity during the following day over the same districts, the precipitation becoming heavy over the Middle Atlantic States and portions of the Ohio Valley, with heavy snows over a wide territory from the Ohio Valley and southern Appalachians northeastward.

The latter part of the week was fair until near the close when precipitation, mostly light, overspread portions of the western mountain districts, and by Monday morning the precipitation area had extended to the Mississippi Valley and by Monday night into many eastern districts, as well as over portions of the Northwest, snow occurring at points in Kansas and Nebraska and thence eastward into portions of the upper Mississippi Valley.

The week, as a whole, was colder than normal—decidedly so from Texas and the west Gulf States northeastward to the Lake region and northern New England, and to a less degree over most other districts—though there was important warming up over the far Northwest where unusually low temperatures had persisted for a number of weeks.

Precipitation was liberal in most districts from the Mississippi Valley eastward, but very little or no snow or rain occurred from the Rocky Mountains westward.

DEPTH OF SNOW ON GROUND

From the middle Rocky Mountains eastward and northeastward to the Atlantic coast considerable snow occurred during the week, particularly about the 20th and 21st, but much of this melted during the closing days of the week over the southern areas.

From the lower Lake region eastward fair increases in the snow depths remained at the end of the week, the present depths ranging up to 5 or even 10 inches greater than those reported a week ago. There were some moderate increases in the snow depth over the high mountains of Oregon and southern Idaho and locally in Utah and some adjacent areas of Wyoming and Colorado, but generally there was little important gain in the snow pack of the western mountains, and reductions in depth due to melting or settling were reported from many points.

The snow-covered area remains about as reported a week ago over the western third, but to the eastward there have been important reductions in the snow-covered area from Missouri eastward over Illinois and Indiana, while over the Middle Atlantic Coast States the snow-covered area is slightly greater than reported a week ago.

ICE IN RIVERS AND HARBORS

Slight increases in the amounts of ice on the rivers and lakes of the more northern districts are noted, but there were some reductions in the more southern areas where ice had previously formed. In general the increases about balanced the decreases, so that the actual ice condition remained about as reported a week ago.

The occurrence of heavy snow over many eastern districts near the beginning of the week and widespread rains at the end were rather unfavorable for the gathering of ice, but this work is probably nearing completion in all important areas.

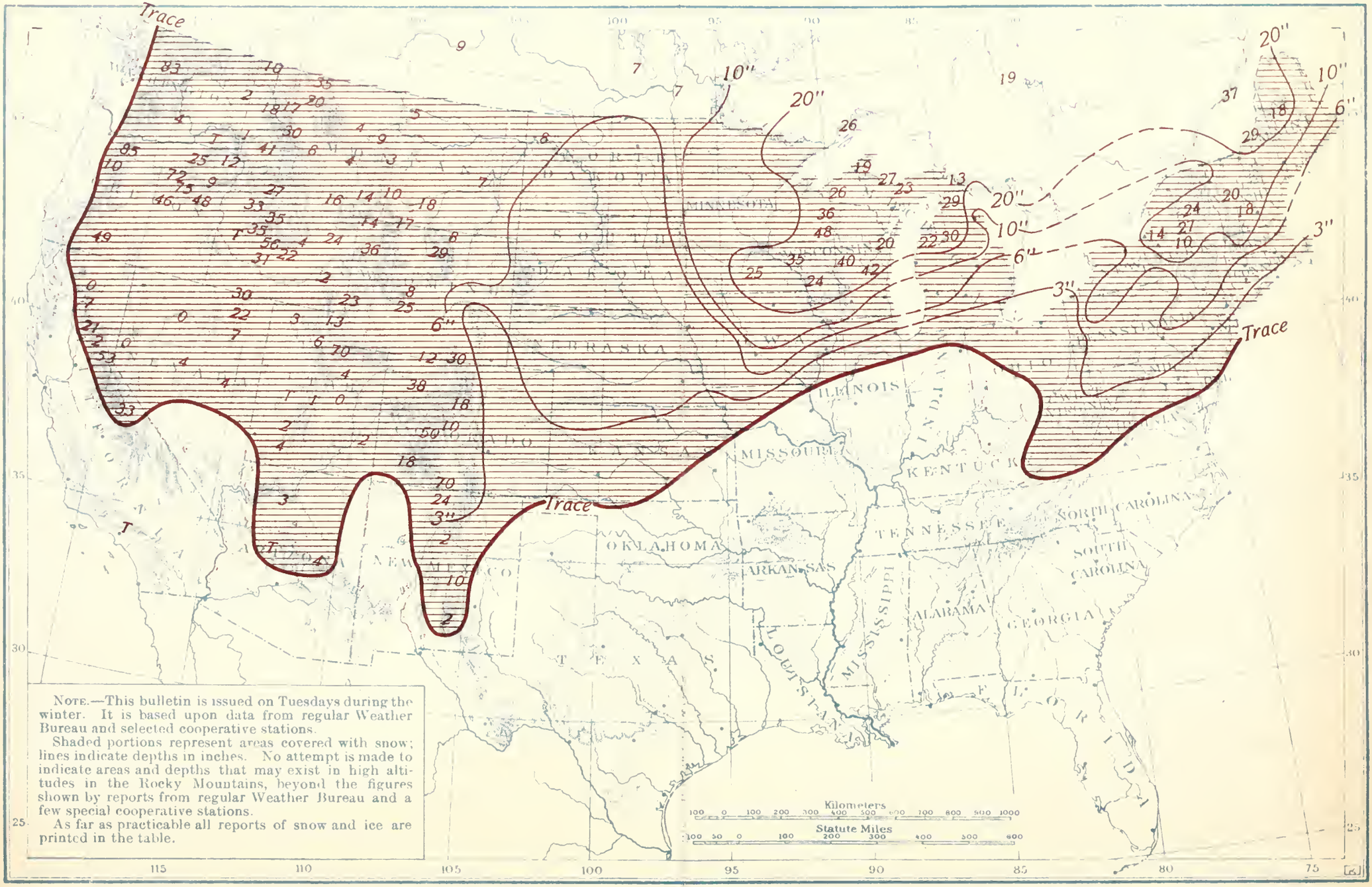
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 25, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*New Mexico*	*Inches*	*Inches*
Cordova	10	.....	Corona	10	.....
Nome	20	.....	Elizabethtown	12	.....
Tanana	26	.....	Santa Fe	2	.....
Colorado			Taos	2	.....
Denver	2	.....	*New York*		
Dillon	18	.....	Albany	6	8.0
Rico	18	.....	Alfred	13	.....
Idaho			Beaver River	24	.....
Big Creek	27	.....	Binghamton	3	.....
Idaho City	35	.....	Cutchogue	4	.....
Montpelier	23	.....	Ithaca	2	.....
Porthill	10	.....	Ogdensburg	8	.....
Iowa			Poughkeepsie	4	.....
Albia	2	.....	Rochester	5	6.0
Dubuque	13	20.0	Rome	12	.....
Keokuk	T.	15.0	*North Dakota*		
Marshalltown	12	.....	Bismarck	3	34.0
Kansas			Williston	8	30.0
Goodland	5	.....	*Ohio*		
Dodge City	2	.....	Beverly	1	.....
Liberal	1	.....	Cleveland	T.	12.0
Wakeeney	3	.....	Cortland	2	.....
Wichita	2	.....	Millersburg	1	.....
Maine			Sandusky	0	13.0
Eastport	6	0.0	*Oregon*		
Gardiner	14	18.0	Government Camp	85	.....
Van Buren	19	.....	Imperial Mine	75	.....
Maryland			Siskiyou	2	.....
Baltimore	2	0.0	*Pennsylvania*		
Frederick	6	.....	Bellefonte	2	.....
Massachusetts			Chambersburg	4	.....
Boston	4	0.0	Freeland	11	.....
Holyoke	10	5.0	Gordon	9	.....
Williamstown	8	.....	Harrisburg	2	3.5
Michigan			Martin	2	.....
Bad Axe	2	.....	Mifflintown	4	.....
Bloomingdale	8	.....	Reading	2	0.0
Escanaba	15	23.5	Scranton	1	.....
Grand Haven	8	.....	Towanda	5	.....
Humboldt	24	.....	Warren	9	.....
Mackinaw	29	.....	West Chester	6	.....
Port Huron	3	22.0	*Rhode Island*		
Minnesota			Kingston	4	.....
Collegeville	18	.....	Providence	3	0.0
Grand Meadow	17	.....	*Utah*		
Minneapolis	11	.....	Cedar City	4	.....
Moorhead	10	31.0	Milford	2	.....
Virginia	21	.....	Ogden	6	.....
Montana			Salt Lake City	2	.....
Belton	35	.....	*Vermont*		
Bozeman	14	.....	Bellows Falls	18	.....
Haugan	30	.....	Burlington	8	10.0
Kalispell	20	.....	Rutland	6	.....
Miles City	7	.....	*West Virginia*		
Missoula	8	.....	Clarksburg	7	.....
Nebraska			Elkins	2	0.0
Auburn	2	.....	Morgantown	4	.....
Grand Island	5	.....	Parkersburg	1	0.0
McCook	4	.....	*Wisconsin*		
Norfolk	3	.....	Brodhead	24	.....
New Hampshire			Eau Claire	35	.....
Concord	12	12.0	Green Bay	20	12.0
Pittsburg	29	.....	La Crosse	24	16.0
Woodsville	5	.....	Milwaukee	6	.....
New Jersey			Park Falls	36	.....
Cape May	2	.....	*Wyoming*		
Lakewood	3	.....	Cheyenne	2	.....
Newton	6	.....	Dixon	12	.....
Phillipsburg	4	.....	Sheridan	8	.....
Sandy Hook	2	0.0	Wheatland	1	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., February 25, 1929



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SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 13 WASHINGTON, D. C., MARCH 6, 1929 WINTER 1928-29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

No particularly low temperatures occurred, but precipitation was heavy in portions of the middle Gulf and Atlantic Coast States, but elsewhere it was mostly light, particularly over the Pacific coast section.

The week opened with cloudy, rainy weather over much of the eastern half of the country, the falls being heavy in portions of the Ohio Valley and Gulf States, the rains continuing Wednesday over the more eastern sections, becoming heavy in the east Gulf districts, and also on Thursday in the same general region, though little precipitation occurred in Florida during this time. In the western districts moderate winter temperatures prevailed, and little rain or snow occurred, though the atmospheric pressure remained comparatively low in the central valleys, and much cloudy, threatening weather existed.

The closing days of the week had much threatening weather, with local precipitation along the northern border and over many districts from the Mississippi Valley eastward, the precipitation becoming heavy during Sunday and Monday over portions of the Gulf and South Atlantic States, some snow falling in the Northwest. At the close a cyclone was central in the middle Gulf States, and precipitation had overspread the Ohio Valley, lower Lake region, and northeastward to southern New England, the falls becoming particularly heavy in the central parts of Alabama, Georgia, and near-by areas.

The weekly means of temperature continued below normal in the central Plateau and Rocky Mountain districts, thence southeastward to Texas and the west Gulf States, but in other parts of the country they were practically everywhere above the normal.

The precipitation was abnormally heavy over a narrow area from southern Louisiana northeastward to the Carolinas, but it was mostly light elsewhere and little or none occurred to westward of the Rocky Mountains and over the southern Plains.

DEPTH OF SNOW ON GROUND

Due to general mild weather over the snow-covered areas, the snow depths decreased in nearly all districts, the areas of greatest melting covering the more northern districts, from Montana and the Dakotas eastward, where the depths are now generally from 3 to 8 or 10 inches less than reported a week ago. The snow depths decreased very materially in the mountain districts of California and to the northward. Elsewhere there was some reduction in the depth, but locally in the high elevations of Colorado and the near-by areas of New Mexico and Wyoming there were moderate increases, and some increases were reported locally in Iowa and southern New England.

The snow-covered area was not materially decreased, save in the middle Plains and over the Atlantic coast sections, though considerable areas in the lower elevations of the western mountain districts became uncovered during the week. Deep snow still covers much of Iowa and the adjacent States of Minnesota, Wisconsin, and northern Michigan.

ICE IN RIVERS AND HARBORS

The condition of the ice in the Great Lakes is set forth in the following telegram from the official in charge at Detroit, Mich.:

Superior, field extends out 10 miles from Duluth; extensive fields central and east portions. St. Marys River, solid. Green Bay, solid; snow-covered, but ferries making regular trips through Sturgeon Bay. Michigan, west shore free of ice; extensive fields moving in and out east shore; solid field Charlevoix north to Straits where ice is 20 inches thick. Huron, extensive fields north and east portions; much open water west shore. St. Clair River, open to below Algonac; Lake St. Clair, opening. Detroit River, apparently open. Erie, considerable ice extreme west and east portions; field extends beyond vision at Buffalo. Ontario, ice fields confined to extreme east portion.

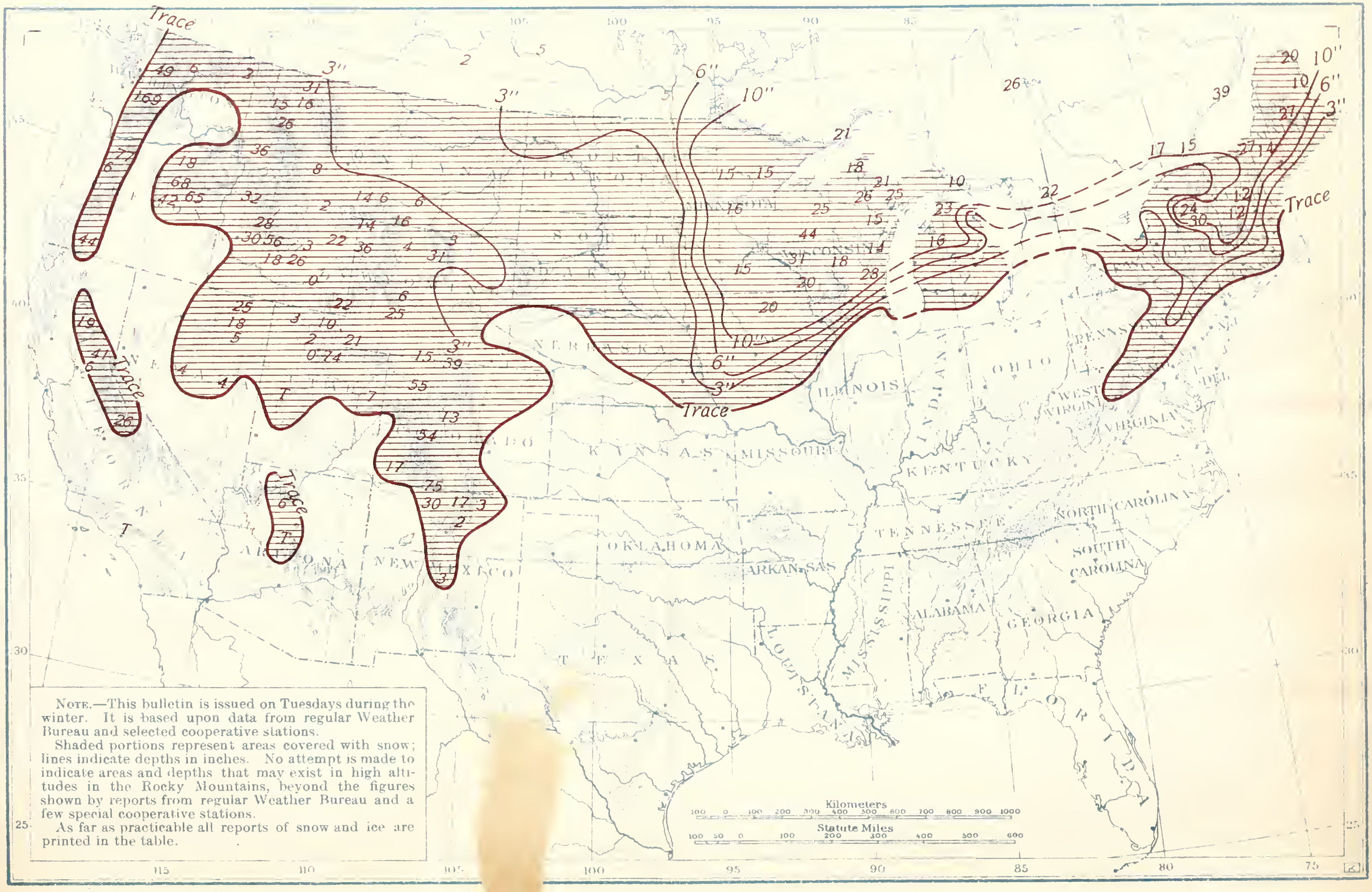
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., MARCH 4, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*Montana*	*Inches*	*Inches*
Barrow	3	.....	Big Timber	6	.....
Cordova	8	.....	Billings	6	.....
Eagle	32	.....	Choteau	2	.....
Juneau	4	.....	Dillon	2	.....
Arizona			Haugan	26	.....
Flagstaff	T.	.....	Kalispell	16	.....
Grand Canyon	6	.....	Miles City	1	.....
California			Philipsburg	8	.....
Huntington Lake	26	.....	Red Lodge	16	.....
Inskip	19	.....	*Nebraska*		
Norden	41	.....	Auburn	4	.....
Colorado			Omaha	3	§
Crested Butte	54	.....	*Nevada*		
Cumbres	75	.....	Arthur	5	.....
Leadville	13	.....	Austin	4	.....
Steamboat Springs	55	.....	Gold Creek	25	.....
Idaho			Kimberly	4	.....
Hailey	18	.....	*New Hampshire*		
McCall	32	.....	Hanover	12	.....
Mascot Mine	26	.....	Keene	11	.....
Pierce City	36	.....	Pittsburg	27	.....
Spencer	22	.....	*New Mexico*		
Vienna Mine	56	.....	Chacon	2	.....
Iowa			Chama	30	.....
Carroll	6	.....	Dawson	3	.....
Charles City	20	.....	Des Moines	3	.....
Des Moines	8	14.0	*New York*		
Estherville	6	.....	Albany	4	3.0
Forest City	6	.....	Buffalo	0	12.0
Pocahontas	15	.....	Canton	1	.....
Sioux City	1	29.5	Delhi	8	.....
Waterloo	16	.....	Lake Placid	3	.....
Maine			Old Forge	30	.....
Farmington	14	.....	Oswego	6	†
Greenville	15	33.0	*Oregon*		
Houlton	10	.....	Fish Lake	44	.....
Portland	2	0.0	Harrison Mine	68	.....
Van Buren	20	.....	Meacham	18	.....
Massachusetts			Olive Lake	42	.....
Amherst	6	.....	*Pennsylvania*		
Holyoke	6	4.5	Allentown	1	.....
Williamstown	11	.....	Freeland	11	.....
Michigan			Holtwood	2	.....
Alpena	1	25.0	*Utah*		
Benzonia	15	.....	Kelton	3	.....
Cadillac	16	.....	Logan	10	.....
East Jordan	12	.....	Silver Lake	74	.....
East Tawas	10	.....	Watson	7	.....
Escanaba	13	20.5	*Vermont*		
Grand Haven	2	.....	Brattleboro	9	16.5
Houghton	18	20.0	Burlington	4	10.0
Iron Mountain	15	.....	Northfield	15	.....
Ludington	8	.....	*Washington*		
Mackinaw	23	.....	Berne	49	.....
Marquette	21	22.5	Paradise Inn	169	.....
Mount Pleasant	4	.....	Twisp	6	.....
Newberry	21	.....	*West Virginia*		
Port Huron	T.	*†	Bayard	4	.....
Sault Ste. Marie	10	21.0	*Wisconsin*		
Minnesota			Green Bay	14	10.0
Duluth	11	26.5	Madison	15	.....
Ely	12	.....	Medford	44	.....
Fort Ripley	16	.....	Wausau	13	23.0
Montevideo	12	.....	*Wyoming*		
Moorhead	2	30.0	Barnum	1	.....
Mora	11	.....	Cody	4	.....
Roseau	9	.....	Dome Lake	37	.....
St. Paul	12	5.5	Foxpark	39	.....
Thief River Falls	21	.....	Lander	6	.....
Worthington	7	.....	Yellowstone Park	14	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., March 4, 1929



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SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 14 WASHINGTON, D. C., MARCH 13, 1929 WINTER 1928–29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

Typical March weather, with frequent and large changes in temperature, high winds, and considerable precipitation prevailed during the early part of the week over eastern districts, but otherwise the weather of the week was mostly moderate, with high temperatures in the West.

The storm area central over the southern Appalachians at the beginning of the week brought heavy rains over the Atlantic and Gulf States and portions of the Ohio Valley during the closing days of the preceding week, with some snow over the more northern sections of the precipitation area. This storm area moved rapidly to the Canadian Maritime Provinces by Wednesday morning, attended by high winds over most eastern districts, and was promptly followed by another storm area over northern districts which moved from the Dakotas eastward to Lake Superior by Wednesday morning and to New England in the following 24 hours. This was attended by light snow over most northern districts and by high winds and gales from the Great Lakes and Ohio Valley eastward, and followed by sharp falls in temperature over all northern and central districts from the Missouri Valley eastward.

During the occurrence of these unfavorable conditions in the East, moderately warm and fair weather was the rule in the West, and during the latter part of the week fair weather was general over all districts save along the Pacific coast where precipitation was rather general on Sunday, extending eastward into the Rocky Mountain regions during Monday, and at this writing the storm area is central in eastern Colorado and heavy snows have occurred locally in the Rocky Mountain region and to the northwestward and rain has overspread the greater part of the Great Plains and the western portions of the Mississippi Valley.

DEPTH OF SNOW ON GROUND

The general absence of important precipitation during the week just closed from the Missouri Valley eastward to the Great Lakes prevented any increase in the depth of the snow cover as compared with last week, and in fact the greater part of this area experienced important melting of the accumulated cover.

Considerable snow melted during the week over southern Michigan and in southern New England, and there were important reductions in the western mountain regions, notably from Colorado northward and in the far Northwest.

There were important increases in the snow depths at the high elevations of California and locally in the Lake Superior region and from western Pennsylvania northeastward to northern New England. A considerable area in the upper Missouri Valley, covered last week, is now bare, and important areas in the foothills of the western mountain districts are also bare, as well as some eastern mountain areas from central West Virginia northward to central Pennsylvania and southern New England.

ICE IN RIVERS AND HARBORS

The ice still holds in the upper portions of the Missouri and Mississippi Rivers and on the streams of interior and northern New England.

The ice conditions over the Great Lakes are shown in the following telegram from the official in charge at Detroit, Mich.:

Superior, ice fields extend out 10 miles from Duluth; extensive fields central and east portions. Whitefish Bay and St. Marys River, solid. Green Bay softening some. Michigan, few fields west shore; more extensive east shore; from Charlevoix north to Straits, ice fields solid and 20 inches thick. Huron, few fields west shore; extensive east shore. St. Clair River filled with running ice Friday and Saturday; also Detroit River. Lake St. Clair, ice forced to east shore; open water west shore. Erie, few fields west end and extensive fields Ashtabula east to Dunkirk; fields at Buffalo extend beyond vision and windrowed. Ontario, fields confined to extreme east end.

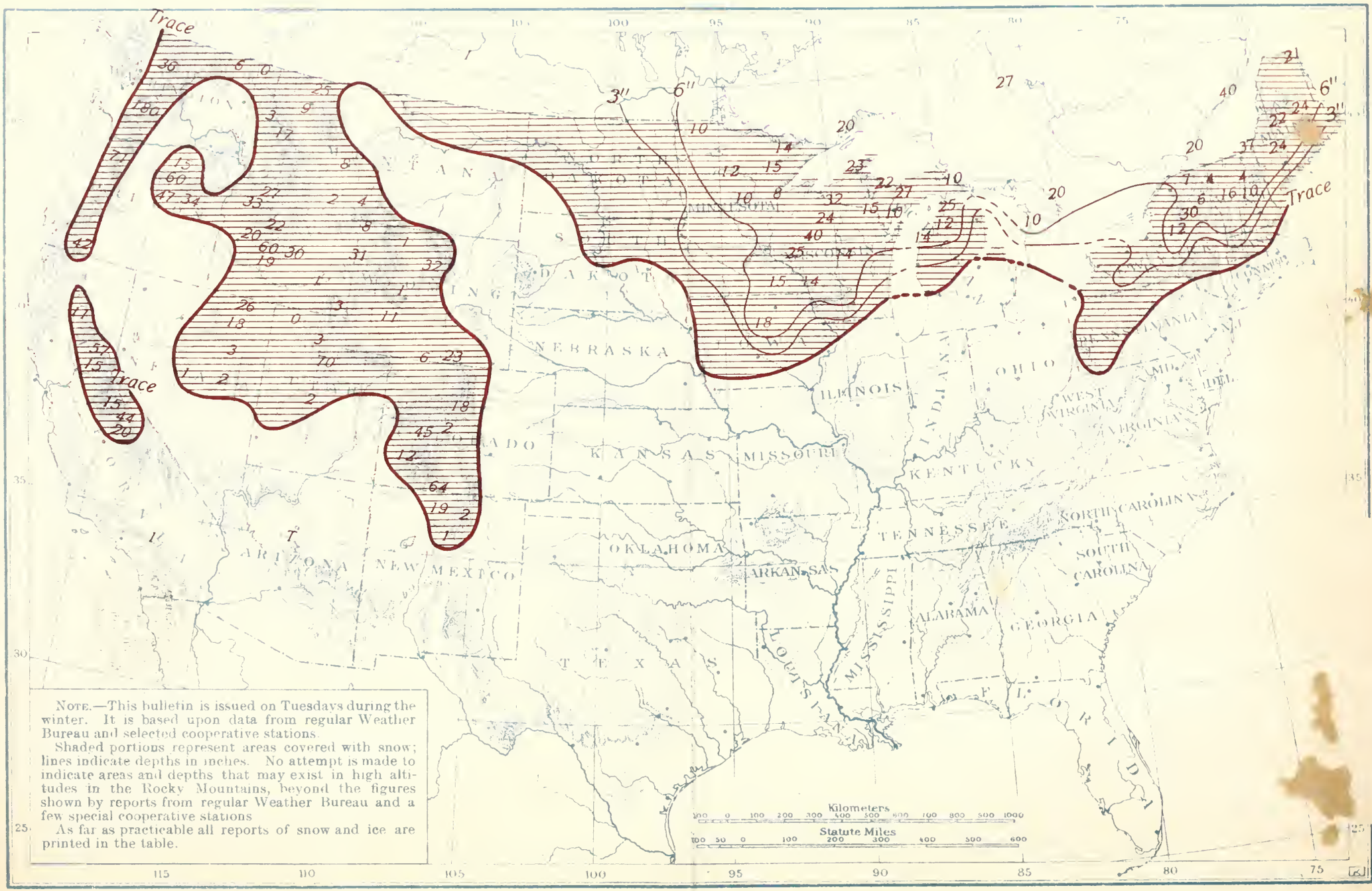
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., MARCH 11, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*New Hampshire*	*Inches*	*Inches*
Fort Yukon	28	.....	Concord	3	10.0
Juneau	3	.....	Hanover	10	.....
Nome	20	.....	Lancaster	6	.....
Tanana	30	.....	Pittsburg	37	.....
California			*New Mexico*		
Big Creek	20	.....	Chama	19	.....
Blue Canyon	15	.....	Santa Fe	1	.....
Macumber	11	.....	*New York*		
Norden	57	.....	Beaver River	30	.....
Yosemite	15	.....	Buffalo	1	11.5
Colorado			Herkimer	3	.....
Crested Butte	45	.....	Jamestown	2	.....
Cumbres	64	.....	Jeffersonville	3	.....
Dillon	18	.....	Lowville	12	.....
Rico	12	.....	Malone	7	.....
Connecticut			Norwich	6	.....
Hartford	0	*	Oswego	4	†
West Cornwall	7	.....	Plattsburg	1	.....
Idaho			Saranac Lake	6	.....
Idaho City	20	.....	Saratoga Springs	3	.....
Kellogg	3	.....	Syracuse	1	.....
Ketchum	12	.....	Watertown	2	.....
Pocatello	1	.....	*North Dakota*		
Soldier Creek	19	.....	Bismarck	T.	31.0
Vienna Mine	60	.....	Ellendale	T.	.....
Iowa			*Ohio*		
Atlantic	T.	.....	Sandusky	0	4.0
Davenport	T.	10.5	*Oregon*		
Des Moines	1	11.0	Austin	34	.....
Dubuque	1	18.0	Fish Lake	42	.....
Iowa City	T.	.....	Government Camp	71	.....
Iowa Falls	18	.....	Imperial Mine	60	.....
Keokuk	0	10.5	Olive Lake	42	.....
Marshalltown	4	.....	Siskiyou	2	.....
Maine			Welches	2	.....
Eastport	3	0.0	*Pennsylvania*		
Gardiner	15	17.0	Franklin	1	.....
Greenville	22	33.0	State College	T.	.....
Millinocket	24	.....	Warren	2	.....
Portland	3	0.0	*South Dakota*		
Michigan			Huron	0	17.0
Grand Rapids	T.	.....	Pierre	T.	§
Grayling	20	.....	*Utah*		
Houghton	23	20.0	Manti	2	.....
Humboldt	26	.....	Ogden	3	.....
Ironwood	32	.....	Salt Lake City	1	.....
Marquette	22	24.0	Silver Lake	70	.....
Munising	27	.....	*Vermont*		
Sault Ste. Marie	10	23.0	Bellows Falls	5	.....
Sidnaw	20	.....	Brattleboro	7	17.0
Minnesota			Burlington	4	13.0
Collegeville	6	.....	Northfield	16	.....
Duluth	8	30.5	St. Johnsbury	10	.....
Grand Meadow	15	.....	*Washington*		
Leech Lake Dam	12	.....	Berne	36	.....
Mankato	6	.....	Paradise Inn	180	.....
Minneapolis	4	.....	Sullivan Lake	6	.....
Virginia	15	.....	*Wisconsin*		
Montana			Ashland	17	.....
Belton	25	.....	Fond du Lac	8	.....
Bozeman	4	.....	Green Bay	6	10.0
Helena	8	.....	La Crosse	7	8.0
Loweth	2	.....	Stevens Point	14	.....
Thompson Falls	3	.....	Wausau	13	20.5
Nebraska			*Wyoming*		
Omaha	T.	*	Alta	31	.....
Nevada			Dome Lake	32	.....
Elko	2	.....	Newcastle	1	.....
Gold Creek	26	.....	South Pass City	11	.....
North Fork	18	.....	Yellowstone Park	8	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., March 11, 1929



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SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 15 WASHINGTON, D. C., MARCH 20, 1929 WINTER 1928-29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

The main features of the weather for the week, March 11–18, were the excessive precipitation during the early part of the period over portions of the Gulf States and the rapid melting of snow from the upper Mississippi Valley eastward.

At the beginning a storm of considerable proportions was central over eastern Colorado and precipitation was falling over a large area from the central Plateau eastward nearly to the middle and lower Mississippi Valley, some snow falling in the northern mountain districts. By the following morning the main storm had moved only slightly northeastward to South Dakota, but precipitation had spread eastward to the upper Lakes, the Ohio Valley, and southeastward over the Gulf and South Atlantic States, heavy rains occurring in the middle Gulf States and snow continuing in portions of the northern Rocky Mountains. During Wednesday, Thursday, and Friday precipitation continued locally over the eastern parts of the country, the rain becoming excessively heavy over the southern portions of Alabama, Georgia, and near-by areas, causing extensive floods over those regions, considerable loss of life, and great damage to property, crops, etc.

The latter part of the week afforded favorable spring weather over most districts, and the week closed with generally rising temperatures and fair weather in nearly all districts, particularly in the flooded regions where the absence of rain afforded opportunity for the floods to begin to run out.

The week, as a whole, was mild over all northern and eastern districts and particularly warm for the season from the upper Missouri Valley eastward to the North Atlantic States.

Precipitation ranged up to slightly more than 15 inches during the week near the middle Gulf coast, diminishing to about 2 inches over the northern parts of those States, and moderate falls occurred over most other districts from the Mississippi River eastward. But little precipitation occurred in the western Plains and thence to the Pacific coast, save for some locally heavy snows in Wyoming and near-by areas, which melted promptly.

DEPTH OF SNOW ON GROUND

There was rapid melting of the snow still on ground at the beginning of the week, the large body of snow on ground in the upper Mississippi Valley and thence eastward over the upper Lakes largely disappearing, with consequent high waters in the streams of that region. Considerable of the snow cover over the mountains of the West disappeared, the greater part of the moderate elevations becoming bare, and the depths in the higher mountains decreasing from 5 to 20 inches. In the northeastern States also important reductions occurred in the snow cover and all save the more northern and some mountain districts became bare.

The snow-covered area is now confined to small portions of northern New York and New England, the northern portions of the upper Lake region, and the higher areas of the western mountain districts.

ICE IN RIVERS AND HARBORS

The ice conditions on the Great Lakes are set forth in the following telegram from the official in charge at Detroit, Mich.:

Superior, field extends 10 miles from Duluth; open water over central and east portions. Whitefish Bay and St. Marys River, softening. Green Bay, softening north portion; open water extreme south. Michigan, no fields west or south shore; drifting fields east shore. Charlevoix north to Straits, fields still solid. Huron, no fields west shore; extensive fields east shore. St. Clair River, Lake St. Clair, and Detroit River, open. Erie, ice fields around islands; open water to beyond Cleveland; drifting fields Ashtabula east to Dunkirk; at Buffalo, fields extend beyond vision, but softening. Ontario, fields confined to extreme east end and softening.

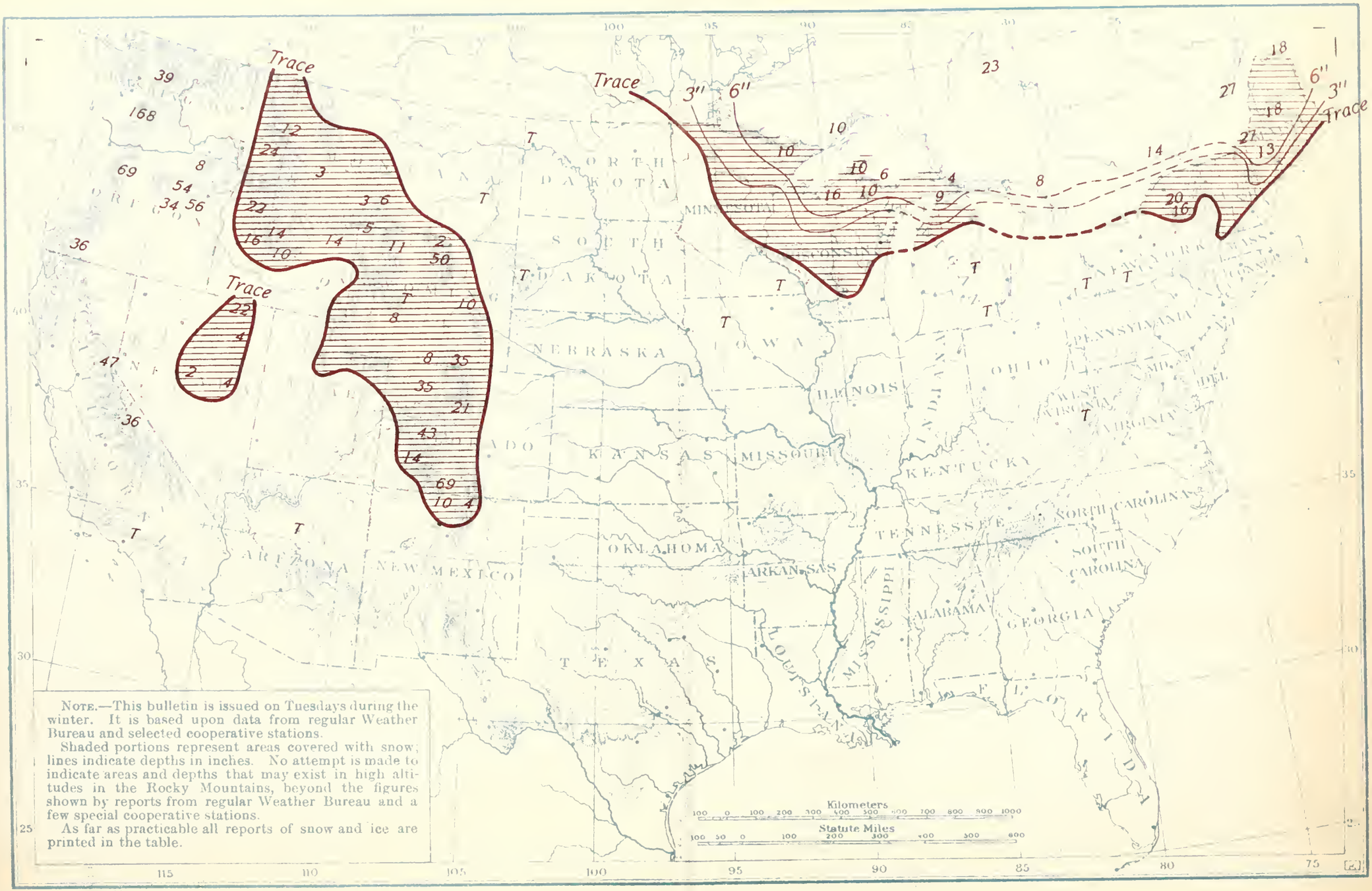
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., MARCH 18, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*Nevada*	*Inches*	*Inches*
Barrow	3	.....	Arthur	4	.....
Cordova	2	.....	Austin	2	.....
Eagle	30	.....	Gold Creek	22	.....
Fort Yukon	20	.....	Kimberly	4	.....
Nome	21	.....	North Fork	6	.....
California			*New Hampshire*		
Blue Canyon	T.	.....	Concord	0	6.0
Huntington Lake	36	.....	Hanover	1	.....
Mount Wilson	T.	.....	Keene	T.	.....
Norden	47	.....	Pittsburg	27	.....
Colorado			Woodsville	T.	.....
Crested Butte	43	.....	*New Mexico*		
Cumbres	69	.....	Chama	10	.....
Denver	T.	.....	Cloudcroft	T.	.....
Dillon	21	.....	Elizabethtown	4	.....
Rico	14	.....	*New York*		
Steamboat Springs	35	.....	Alfred	T.	.....
Connecticut			Beaver River	20	.....
Hartford	0	†	Canton	1	.....
Idaho			Fredonia	T.	.....
Hailey	8	.....	Malone	1	.....
Idaho City	16	.....	Ogdensburg	1	.....
Ketchum	10	.....	Old Forge	16	.....
Kirkham	14	.....	*North Dakota*		
McCall	22	.....	Bismarck	0	29.0
Montpelier	2	.....	Williston	T.	§
Pierce City	24	.....	*Oregon*		
Spencer	14	.....	Fish Lake	36	.....
Iowa			Government Camp	69	.....
Davenport	0	†	Harrison Mine	54	.....
Pocahontas	T.	.....	Imperial Mine	56	.....
Sioux City	0	†	Meacham	8	.....
Maine			Olive Lake	34	.....
Eastport	T.	0.0	*South Dakota*		
Farmington	13	.....	Rapid City	T.	.....
Gardiner	8	11.0	Yankton	0	†
Greenville	18	32.0	*Utah*		
Van Buren	18	.....	Silver Lake	70	.....
Michigan			*Vermont*		
Benzonia	T.	.....	Bethel	3	.....
Escanaba	T.	15.0	Brattleboro	0	*
Houghton	10	18.0	Burlington	T.	8.0
Humboldt	10	.....	Northfield	1	.....
Iron Mountain	3	.....	St. Johnsbury	T.	.....
Iron River	6	.....	White River Junction	T.	.....
Ironwood	16	.....	*Washington*		
Lansing	T.	.....	Berne	30	.....
Mackinaw	9	.....	Paradise Inn	168	.....
Marquette	6	22.0	*West Virginia*		
Saginaw	T.	.....	Camden-on-Gauley	T.	.....
Sault Ste. Marie	4	20.0	*Wisconsin*		
Sidnaw	8	.....	Eau Claire	T.	.....
Minnesota			Fond du Lac	T.	.....
Duluth	T.	28.5	Green Bay	T.	0.0
Ely	10	.....	La Crosse	0	†
Fort Ripley	T.	.....	Madison	T.	.....
Leech Lake Dam	3	.....	Park Falls	6	.....
Moorhead	0	28.0	Wausau	2	§
Roseau	4	.....	*Wyoming*		
St. Paul	T.	0.0	Casper	10	.....
Montana			Cheyenne	T.	.....
Big Timber	6	.....	Cody	11	.....
Bozeman	3	.....	Dixon	8	.....
Great Falls	T.	.....	Dome Lake	50	.....
Haugan	12	.....	Foxpark	35	.....
Helena	T.	.....	Lander	T.	.....
Kalispell	T.	.....	Sheridan	2	.....
Miles City	T.	.....	South Pass City	8	.....
Philipsburg	3	.....	Wheatland	T.	.....
Stanford	2	.....	Yellowstone Park	5	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., March 18, 1929



NOTE.—This bulletin is issued on Tuesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.

Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist in high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 16 WASHINGTON, D. C., MARCH 27, 1929 WINTER 1928-29

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

The week opened with clear weather and moderate temperatures over the greater part of the country, and this condition continued until Thursday. By Friday morning rain had overspread a considerable area from the lower Rio Grande Valley northeastward to the St. Lawrence Valley, and cloudy weather with local precipitation had advaneed from the far Northwest into the northern Plains, some snow being reported from the more northern districts.

By Saturday the eastern precipitation had moved to the Atlantic coast, save for a narrow area near the South Atlantic coast, the fall becoming heavy in portions of the Gulf States and lower Ohio Valley, and precipitation, mostly light snow, continued in the western mountain districts.

During Sunday, precipitation, mostly light snow, continued over portions of the western mountains, but it had generally cleared over the eastern districts and moderate temperatures were the rule over that area.

The last few days of the week were without important precipitation, save for some light snows in the western mountains, and light rains from the Great Lakes and Ohio Valley eastward with local snows in New England.

The week as a whole was warm from the Rocky Mountains eastward and decidedly so from the middle Mississippi Valley to the Atlantic coast, where the averages ranged from 10° to 18° above the seasonal normal. West of the Rocky Mountains the weekly temperatures were nearly everywhere below the normal, though the departures were not large. Precipitation was again heavy locally in portions of the Gulf States and lower Mississippi Valley, and rains were somewhat general over the remaining areas from the Mississippi Valley eastward. Considerable snow occurred in the western mountain districts, but much of this soon melted at the lower elevations, and there was but little precipitation of any kind in other western districts.

DEPTH OF SNOW ON GROUND

Over the eastern districts the snow cover is still confined to the more northern portions and there were small local increases in the upper Lake region. In New England and northern New York the snow cover is largely gone save in the deep woods and at elevated points.

Over the western mountain districts there were material increases generally at the higher levels, the new snow amounting to from 10 to 15 inches or more in the higher ranges, though some areas had but slight increases and from Wyoming northwestward to Idaho and some near-by areas there were general decreases as compared with the preceding week.

ICE IN RIVERS AND HARBORS

At this date the ice has broken up on all the principal rivers save in interior New England, and is generally passing out of the upper reaches of the Missouri and the Mississippi Rivers and has passed out of the Ohio and its tributaries and most eastern rivers save in northern New England.

The ice conditions on the Great Lakes are set forth in the following telegram from the official in charge at Detroit, Mich.:

Duluth; harbor ice decreasing, lake field extends out seven miles; drifting fields off Keweenaw Point; open water Marquette; drifting fields east portion Whitefish Bay. St. Marys River, ice honeycombing and diminishing. Green Bay, ice diminishing north, open water south end. Michigan, no fields west or south shore, drifting fields east shore; Charlevoix north to Straits, extensive fields but decreasing in thickness. Huron, no fields west, drifting fields east shore. St. Clair River, Lake St. Clair, and Detroit River open. Erie, small fields around Islands, open water east to Dunkirk; at Buffalo, fields extensive, but ice becoming unsafe. Ontario, small field extreme east portion.

P. C. DAY,
Meteorologist, in charge of Division.

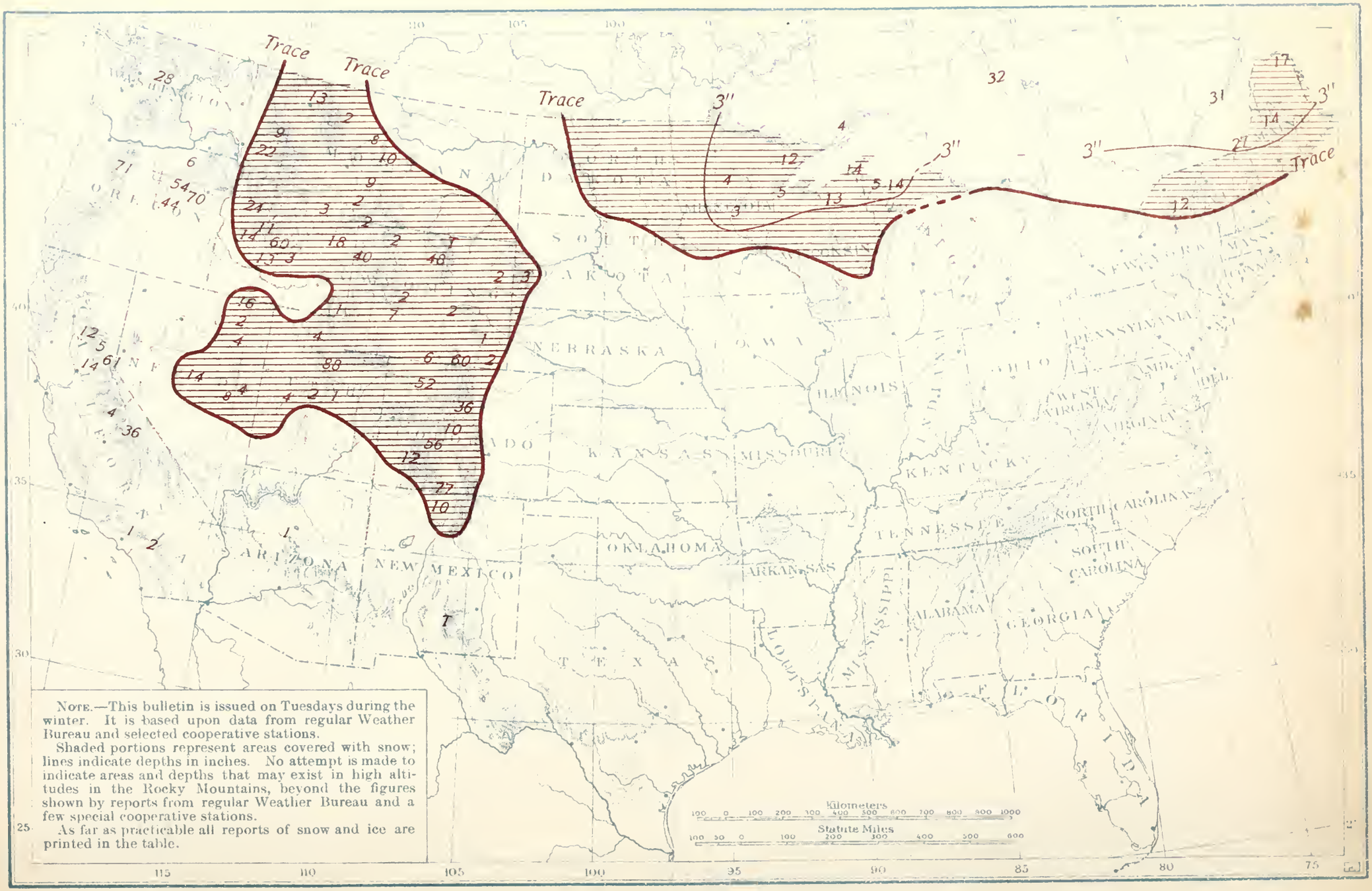
SNOW DEPTH AND ICE THICKNESS, 8 P. M., MARCH 25, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
Alaska	*Inches*	*Inches*	*Nevada*	*Inches*	*Inches*
Barrow	3	.....	Arthur	4	.....
Eagle	28	.....	Austin	14	.....
Nome	32	.....	Gold Creek	16	.....
Tanana	30	.....	Kimberly	8	.....
Arizona			McGill	4	.....
Flagstaff	1	.....	North Fork	2	.....
California			*New Hampshire*		
Big Creek	1	.....	Pittsburg	27	.....
Blue Canyon	14	.....	*New Mexico*		
Huntington Lake	36	.....	Chama	10	.....
Inskip	12	.....	Cloudcroft	T.	.....
Mount Wilson	1	.....	Tres Piedras	T.	.....
Norden	61	.....	*New York*		
Sierraville	5	.....	Beaver River	12	.....
Squirrel Inn	2	.....	Buffalo	0	7.0
Yosemite	4	.....	Canton	T.	.....
Colorado			*North Dakota*		
Crested Butte	56	.....	Bismarck	1	0.0
Cumbres	77	.....	Devils Lake	1	.....
Dillon	36	.....	Ellendale	T.	.....
Leadville	10	.....	*Oregon*		
Rico	12	.....	Government Camp	71	.....
Steamboat Springs	52	.....	Harrison Mine	54	.....
Idaho			Imperial Mine	70	.....
Hailey	2	.....	Meacham	6	.....
Idaho City	14	.....	Olive Lake	44	.....
Ketchum	3	.....	Siskiyou	6	.....
Kirkham	11	.....	*South Dakota*		
McCall	24	.....	Rapid City	3	.....
Pierce City	22	.....	*Utah*		
Soldier Creek	13	.....	Deseret	4	.....
Spencer	18	.....	Logan	1	.....
Vienna Mine	60	.....	Manti	2	.....
Maine			Moab	T.	.....
Eastport	1	0.0	Modena	T.	.....
Gardiner	T.	‡	Ogden	4	.....
Greenville	14	32.0	Price	1	.....
Houlton	6	.....	Salt Lake City	T.	.....
Van Buren	17	.....	Silver Lake	88	.....
Michigan			*Vermont*		
Escanaba	T.	14.5	Brattleboro	0	†
Houghton	14	14.0	Burlington	0	†
Ironwood	13	.....	Northfield	T.	.....
Marquette	5	16.0	St. Johnsbury	T.	.....
Munising	14	.....	White River Junction	T.	.....
Newberry	2	.....	*Washington*		
Sault Ste. Marie	T.	18.0	Berne	28	.....
Sidnaw	6	.....	*Wisconsin*		
Minnesota			Medford	2	.....
Duluth	5	22.5	Park Falls	3	.....
Ely	12	.....	Wausau	T.	0.0
Fort Ripley	3	.....	*Wyoming*		
Leech Lake Dam	4	.....	Alta	40	.....
Montevideo	2	.....	Barnum	1	.....
Moorhead	T.	*	Casper	2	.....
Mora	3	.....	Cheyenne	2	.....
St. Paul	T.	0.0	Cody	2	.....
Montana			Dixon	6	.....
Belton	13	.....	Dome Lake	48	.....
Big Timber	2	.....	Foxpark	60	.....
Billings	4	.....	Lander	2	.....
Dillon	3	.....	Newcastle	2	.....
Great Falls	8	.....	Sheridan	T.	.....
Haugan	9	.....	South Pass City	7	.....
Loweth	9	.....	Wheatland	1	.....
Stanford	10	.....	Yellowstone Park	2	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

This issue closes the season of the Snow and Ice Bulletin of 1928-29. Further reports on ice conditions in the Great Lakes will be issued weekly from Detroit.

Depth of Snow on Ground, 8 p. m., March 25, 1929



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